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February 10, 2020

Julie Sullivan
Remedial Project Manager
United States Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

Subject: Quarterly Performance Evaluation Report, Fourth Quarter 2019
Full Scale On-Site Soil Remedy
Omega Chemical Superfund Site, Operable Unit 1, Whittier, California

Dear Ms. Sullivan:

Enclosed for your review is the Fourth Quarter 2019 Performance Evaluation Report for the Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site, Operable Unit 1, Whittier, California.

Should you have any questions, regarding the above, please contact me.

Sincerely,

Omega Chemical Site PRP Organized Group

Edward Modiano
Project Coordinator

Jaime Dinello, PE
Project Manager

cc: Don Indermill, DTSC

de maximis, inc.

FEBRUARY 10, 2020

FULL SCALE ON-SITE SOIL REMEDY
PERFORMANCE EVALUATION REPORT
FOURTH QUARTER 2019
OMEGA CHEMICAL SUPERFUND SITE, OU-1

Prepared for:

Omega Chemical Site
PRP Organized Group
(OPOG)

Prepared by:

de maximis, inc.
1322 Scott Street, Suite 104
San Diego, CA 92106

FULL-SCALE ON-SITE SOIL REMEDY
OMEGA CHEMICAL SUPERFUND SITE, OU-1

Quarterly Performance Evaluation Report
Fourth Quarter 2019

TABLE OF CONTENTS

FULL-SCALE ON-SITE SOIL REMEDY

OMEGA CHEMICAL SUPERFUND SITE, OU-1

Quarterly Performance Evaluation Report

Fourth Quarter 2019

1. INTRODUCTION

This Quarterly Performance Evaluation Report (QPER) has been prepared on behalf of the Omega Chemical Site Potentially Responsible Parties Organized Group (OPOG) to comply with the October 6, 2010 Consent Decree No. 10-05051 (CD) between United States Environmental Protection Agency (USEPA) and OPOG (USEPA, 2010). The CD requires OPOG to design, construct, and operate a full-scale soil vapor extraction (SVE) and treatment system and perform associated monitoring to address vadose zone soil within Operable Unit 1 (OU-1). The CD Statement of Work satisfies the requirements of the 2008 OU-1 Record of Decision (ROD) (USEPA, 2008). Figure 1 shows the general location of OU-1, as well as the occupancy status of buildings within the operable unit. The locations of the OU-1 SVE system components, including the associated Vapor Extraction Wells (VEWs), the Dual Phase Extraction (DPE) wells, the treatment plant, and the associated Vapor Monitoring Probes (VMPs), are presented in Figure 2.

Remedial Action Objective (RAO) compliance monitoring includes the collection of soil gas and indoor air data within the OU-1 boundary. Current monitoring requirements are as follows:

- OU-1 SVE system operational data are collected to determine whether treated vapor emissions are substantively compliant with South Coast Air Quality Management District (SCAQMD) requirements as well as to conform to the requirements of the Draft OU-1 SVE Operations, Maintenance, and Monitoring (OM&M) Manual (CDM Smith, 2018a). Note that this document is undergoing modification consistent with recent discussions with USEPA. These data are included in Section 2.

- Shallow soil gas data are collected semi-annually during the first and third quarters from specified VMPs in the shallow vadose zone (0 – 30 feet below ground surface [bgs]) to

show that concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) are declining in the vadose zone, making progress toward achieving the specified soil gas cleanup levels that are protective of indoor air (RAO #1) and will also ultimately result in achieving soil cleanup levels (RAO #2). These data are collected from VMPs and assessed in accordance with the USEPA-approved soil gas sampling memo (CDM Smith, 2018b). The USEPA-approved soil gas sampling memo specifies all required compliance monitoring for the OU-1 SVE system until the approval of the OM&M Manual. These data, if collected, are included in Section 3.

- Deep soil gas data are collected semi-annually during the first and third quarters from specified VMPs in the deep vadose zone (40 – 70 feet bgs) to show that deep soil gas concentrations are declining over time (RAO #3). These data are also collected and assessed in accordance with the USEPA-approved soil gas sampling memo (CDM Smith, 2018b). These data, if collected, are included in Section 3.

- Indoor air data are collected from within occupied OU-1 buildings to show that concentrations of PCE and TCE in indoor air are below acceptable risk levels (RAO #1). Indoor air compliance monitoring for 2019 is based on the 2019 Indoor Air Quality Sampling Plan (de maximis. 2019), which prescribes the sampling locations and structures to be sampled during the 2019 Annual (January) and Semi-Annual (July) monitoring events. These data, if collected, are included in Section 4.

- Soil concentration data in the shallow vadose zone (0 – 30 feet bgs) will be collected in the future after mutual agreement between USEPA and OPOG. This will occur after shallow soil gas concentrations remain below ROD cleanup levels subsequent to USEPA-approved rebound testing.

2. OU-1 SVE SYSTEM OPERATIONS THIS QUARTER

The OU-1 SVE System functioned this quarter with minimal issues or downtime. Alarm testing occurred on November 11, 2019, with all switches and alarms found to be functioning as designed. In addition, leak testing of the VE-39S conveyance line was conducted on November 11, 2019. This testing was conducted as OPOG has been unable to collect a sample at this location recently to excess moisture. To complete this test, an inflatable plug was used to isolate the conveyance line at the wellhead and then the line was brought to pressure to see if line held

the injected air or if the pressure dissipated through a leak. Results of this test indicated that there is a leak in the VE-39S conveyance line. OPOG is currently evaluating options of address this leak.

Approximately 11.7 pounds of VOC mass were removed from soil gas this quarter, compared to 9.9 pounds removed in the previous quarter. Figure 3 shows the cumulative mass removed since 2010.

VACUUM BLOWER

As shown in Attachment A, Table A-1, the OU-1 SVE system functioned this quarter with an up time of approximately 100%.

VAPOR EXTRACTION WELLS (VEWs) AND DUAL PHASE EXTRACTION (DPE) WELLS

All OU-1 SVE system VEWs and DPE wells were mechanically functional during this quarter. VEW and DPE well operational data, including flow rate, total volatile organic compound (VOC) concentrations, as measured by photoionization detector (PID) readings and laboratory analyses (if analytical samples were collected), vacuum, temperature, relative humidity, and estimated mass removed per well during the quarter are presented in Attachment B, Table B-1. No VEW influent manifold valve adjustments are recommended this quarter.

VAPOR MONTORING PROBES

The extraction wells provided enough vacuum influence to continue to remove mass and mitigate vapor migration. Per the EPA-approved soil gas memo, vacuum/pressure monitoring at specified VMPs shall be conducted quarterly, and analytical monitoring shall be conducted semi-annually (typically first and third quarters) except for select VMPs which are monitored for both vacuum and analytical concentrations annually. A summary of the VMP vacuum monitoring collected this quarter are included in Attachment C (Tables C-1/Figure C-1 and Table C-2/Figure C-2 for shallow and deep VMPs respectively). Semi-annual VMP analytical monitoring was not conducted this quarter. Figures 4 and 5 are placeholders for presentations of concentrations of PCE and TCE measured during a quarter.

Though not collected this quarter, Attachment D serves as a placeholder for monitoring data collected from other VMPs not included in the EPA-approved soil gas memo.

TREATED VAPOR DISCHARGE

The OU-1 SVE system operated in accordance with treated vapor discharge limits and VGAC operational requirements. The VGAC changeout criteria were not triggered during this quarter (Attachment A). The criteria are currently based on the existing Health Risk Assessment (HRA, CDM Smith, 2015), which is currently being updated as part of the revised OU-1 SVE OM&M Manual. The most recent carbon changeout of the lead and lag vessels was completed on March 15, 2019.

Table 1 shows the VOC concentrations in the VGAC influent, midpoint, and effluent samples and effluent discharge limits. Figure 6 shows VGAC influent concentrations for PCE and TCE since 2010. Attachment A, Table A-1 shows the flow rate, temperature, and total VOC concentrations, as indicated by a PID. Figure A-1 shows selected parameters over time.

Operational field forms (for all monitoring discussed in this section) are provided in Attachment E. Analytical laboratory reports are provided in Attachment F. A summary of the results of the data quality assessment and data validation reports are provided in Attachment G.

3. SOIL GAS COMPLIANCE MONITORING

Per the EPA-approved soil gas memo, semi-annual VMP analytical monitoring was not conducted this quarter.

4. INDOOR AIR COMPLIANCE MONITORING

The occupancy status and current monitoring schedule for each building is summarized in Table 2. Indoor air sampling is generally only conducted in buildings that are occupied. Occupancy status is verified each quarter.

As discussed above, indoor air compliance monitoring is conducted during the Annual (January) and Semi-Annual (July) monitoring events. Thus, no routine indoor air monitoring was conducted during the fourth quarter. Figure 7, not included this quarter, is a placeholder to present indoor air monitoring results for PCE and TCE. Attachment H is a placeholder for a summary of indoor air monitoring results.

5. SUBMITTALS DURING THE QUARTER

The following submittals were made this quarter as part of the OU-1 Full Scale On-site Soil Remedy:

- Full Scale On-site Soil Remedy QPER, Third Quarter 2019 (November 15, 2019)
- 2020 Indoor Air Quality Sampling Plan (November 26, 2019)

6. PLANNED ACTIVITIES

Planned operational and monitoring activities scheduled for the next quarter include the following:

- Monthly vacuum, flow, temperature and PID monitoring at VEWs and DPE wells
- Quarterly vacuum monitoring and semi-annual analytical monitoring at VMPs
- Review of VEW, DPE well, and VMP data to assess the need for optimizing performance
- Monthly assessment of VGAC effectiveness and need for VGAC changeout
- Operational changes (i.e. manifold adjustments) noted in this report (if any)
- January Annual IAQ monitoring event per the submitted 2020 Indoor Air Quality Sampling Plan
- Quarterly performance reporting

7. PROBLEMS OR ISSUES OF CONCERN

None.

8. REFERENCES

CDM. (2007). *Final Human Health Risk Assessment for On-Site Soils*

CDM Smith. (2015). *Memorandum: Treatment of Effluent from Groundwater Treatment System and Soil Vapor Extraction, Omega Chemical Superfund Site, Whittier, California 90602, February 26*

CDM Smith. (2018a). *DRAFT – Operable Unit 1 Soil Vapor Extraction System Operations, Maintenance, and Monitoring Manual, December 21.*

CDM Smith. (2018b). *Revised 2018 Operable Unit 1 (OU-1) On-site Soil Remedy Soil Gas Monitoring, August 27*

de maximis, inc. (2019). *2019 Indoor Air Quality Sampling Plan, Omega Chemical Superfund Site.* January 25

USEPA. (2008). *Record of Decision for OU-1 Soils.*

USEPA. (2010). *Consent Decree Docket No. 10-05051, October 6*

TABLES

Table 1
Vapor Phase GAC Analytical Data Demonstrating Substantive Compliance With SCAQMD Regulations
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

SCAQMD Chemical-Specific Effluent Limit[1]			**2,208**	**198**	**84**	**15**	**14**	**48**	**1,082**	**65**
Sample Location	**Sample Date**	**Units**	**PCE**	**TCE**	**VC**	**11DCA**	**12DCA**	**CF**	**MeC**	**BEN**
OU-1 SVE GAC INFLUENT	10/1/2019	ppbv	120	5.4	1.2 U	1.2 U	1.2 U	1.2 U	12 U	1.2 U
OU-1 SVE GAC MIDPOINT	10/1/2019	ppbv	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	12 U	1.2 U
OU-1 SVE GAC EFFLUENT[2]	10/1/2019	ppbv	**1.1 U**	**1.1 U**	**1.1 U**	**1.1 U**	**1.1 U**	**1.1 U**	**11 U**	**1.1 U**
OU-1 SVE GAC INFLUENT	11/4/2019	ppbv	160	5.8	1.3 U	1.3 U	1.3 U	1.3 U	13 U	1.3 U
OU-1 SVE GAC MIDPOINT	11/4/2019	ppbv	1.2	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	12 U	1.2 U
OU-1 SVE GAC EFFLUENT[2]	11/4/2019	ppbv	**1.2 U**	**1.2 U**	**1.2 U**	**1.2 U**	**1.2 U**	**1.2 U**	**12 U**	**1.2 U**
OU-1 SVE GAC INFLUENT	12/3/2019	ppbv	83	4.4	1.2 U	1.2 U	1.2 U	1.2 U	12 U	1.2 U
OU-1 SVE GAC MIDPOINT	12/3/2019	ppbv	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	12 U	1.2 U
OU-1 SVE GAC EFFLUENT[2]	12/3/2019	ppbv	**1.2 U**	**1.2 U**	**1.2 U**	**1.2 U**	**1.2 U**	**1.2 U**	**12 U**	**1.2 U**
Compliance with Effluent Limits?			**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Notes:

1. SCAQMD effluent limits are derived from the Health Risk Assessment (CDM Smith, 2015).

2. Bold text indicates vapor effluent results from the VGAC effluent required to meet SCAQMD HRA chemical specific limits shown in the table.

OU-1 SVE GAC Influent = VOC-laden vapor sample collected at the influent to the lead VGAC vessel.

OU-1 SVE GAC Midpoint = Partially treated vapor sample collected between the lead and lag VGAC vessels.

OU-1 SVE GAC Effluent = Fully treated vapor sample collected at the effluent from the lag (polishing) VGAC vessel.

U - Not detected above reporting limit listed

PCE - Tetrachloroethene
TCE - Trichloroethene
VC - Vinyl Chloride
11DCA - 1,1-Dichloroethane
12DCA - 1,2-Dichloroethane
CF - Chloroform
MeC - Methylene Chloride
BEN - Benzene

Table 2
Status of Indoor Air Sampling at Buildings Wholly or Partially within the OU-1 Phase 1a Boundary
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

Building	Location Designation	Building Occupancy	Vacancy Status Verification	Current Monitoring Status	Date Last Sampled[1]	Next Planned Sampling Date	Sampling Rationale
Sunland Enterprises (Former Omega Administration)	Within OU-1 Boundary	Occupied	Verified in person 4Q2019	Annual	1/17/2020	January 2021	- Sampled as part of Remedial Investigation - Building unoccupied between 2005 and 2018. The bulding is currently leased to Sunland Enterprises, Division of E&A Car Wash Systems - EPA has not requested indoor air sampling under the 2009 AOC - Under influence of soil vapor extraction since 2011 - Building was incorporated into the annual monitoring program proposed in the 2020 Indoor Air Quality Sampling Plan (submitted to EPA on November 26, 2019)
Bishop	Partly within OU-1 Boundary	Occupied	Verified in person 4Q2019	Semi-Annual	1/16/2020	July 2020	- Required indoor air sampling under the 2009 AOC - Under influence of soil vapor extraction since 2010 - Reduced monitoring frequency from quarterly to semi-annual (approved by EPA in letter to OPOG on November 28, 2018).
Madsen Roofing	Within OU-1 Boundary	Partially Occupied	Verified in person 4Q2019	Annual	1/17/2020	January 2021	- Required indoor air sampling under the 2009 AOC - Under influence of soil vapor extraction since 2010 - Reduced monitoring frequency from semi-annual to annual (approved by EPA in letter to OPOG on November 28, 2018).
Star City Auto Body	Within OU-1 Boundary	Occupied	Verified in person 4Q2019	Annual	1/16/2020	January 2021	- Required indoor air sampling under the 2009 AOC - Under influence of soil vapor extraction since 2010 - Reduced monitoring frequency from semi-annual to annual (approved by EPA in letter to OPOG on November 28, 2018).
Terra Pave	Within OU-1 Boundary	Partially Occupied	Verified in person 4Q2019	Semi-Annual	1/16/2020	July 2020	- Required indoor air sampling under the 2009 AOC - Under influence of soil vapor extraction since 2010 - Reduced monitoring frequency from quarterly to semi-annual (approved by EPA in letter to OPOG on November 28, 2018).

Notes:

1. The dates reflected in this column are from the January 2020 Annual sampling event which occurred prior to the submission of this report. These data will be included in the First Quarter 2020 Report.

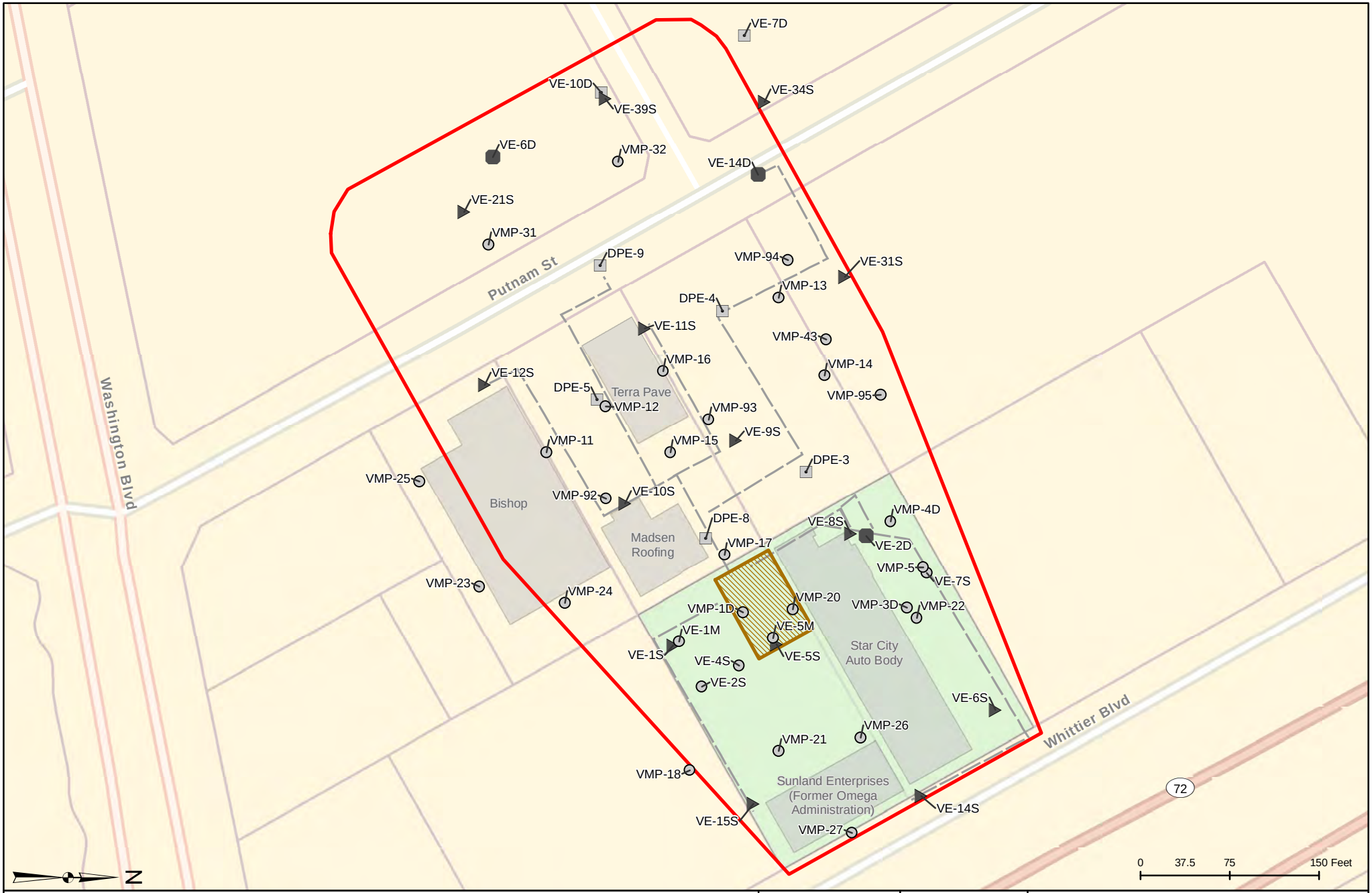
FIGURES

OU-1 Boundary
Building Currently Commercially/Industrially Occupied
Building Currently Vacant
Former Omega Chemical Property Boundary

ddms
de maximis, inc.

Reviewed By: MH
Drawn By: LEM
Date: 1/22/2019

Figure 1
OU-1 Location Map
OU-1 Full Scale On-Site Soil Remedy,
Omega Chemical Superfund Site
12504/12512 East Whittier Boulevard
Whittier, California



- Shallow Vapor Extraction Well (<30ft bgs)
- Deep Vapor Extraction Well (>30ft bgs)
- Dual Phase Extraction Well
- Building Currently Commercially/Industrially Occupied
- Building Currently Vacant
- Vapor Monitoring Probe
- OU-1 SVE Treatment Plant
- OU-1 Boundary
- Former Omega Chemical Property Boundary
- Conveyance Piping

Not all conveyance piping shown. Locations are approximate.

ddms
de maximis, inc.

Reviewed By: LM
Drawn By: KM
Date: 2/12/2019

Figure 2
OU-1 SVE System Location Map
OU-1 Full Scale On-Site Soil Remedy,
Omega Chemical Superfund Site

Figure 3
OU-1 SVE System Cumulative Mass Removed
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

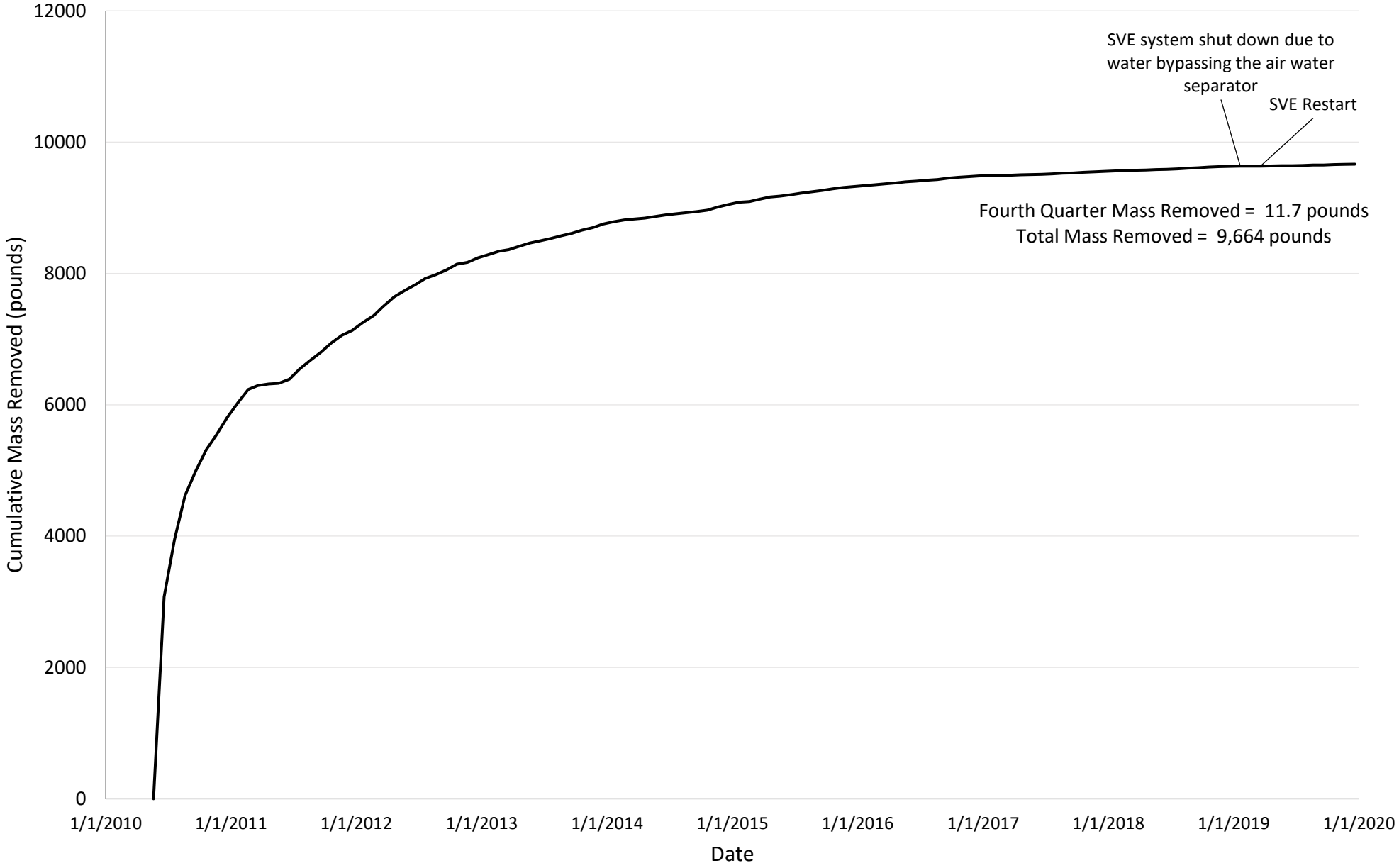
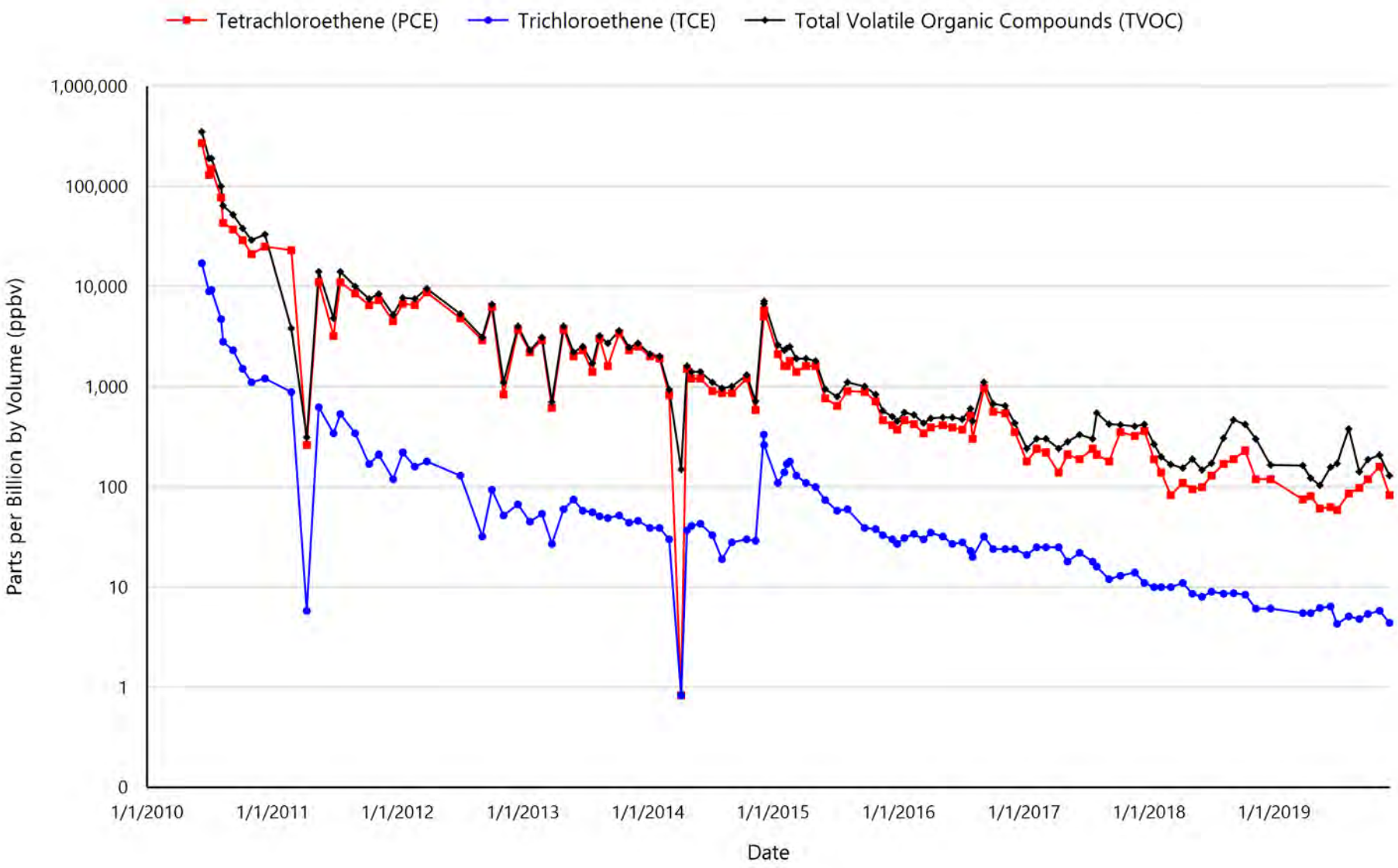


Figure 6
Vapor Phase GAC Influent Concentrations
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019



ATTACHMENT A

OU-1 SVE System Operational Data

Attachment A, Table A-1
OU-1 SVE System Operational Data Demonstrating Substantive Compliance With SCAQMD Operational Limits
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

SCAQMD Limit[4]				**1280**	**145**				**15**			
HRA Changeout Criteria								**50[3]**		**90[3]**		
Date	**Interval Run Time (hr)**	**Up Time[5] (%)**	**Influent Vapor Relative Humidity (%)**	**Influent Vapor Flow Rate (SCFM)**	**VGAC Influent Vapor Temperature (°F)**	**VGAC Effluent Vapor Temperature (°F)**	**VGAC Influent PID Measurement (ppmv)**	**VGAC Midpoint PID Measurement (ppmv)**	**VGAC Effluent PID Measurement (ppmv)**	**Lead VGAC Efficiency[1] (%)**	**Overall VGAC Efficiency[2] (%)**	**Mass Removed (lbs, monthly total)**
10/1/2019	140		55.0	1110	101.4	91.7	5.8	0.4	0.5	93	91	
10/7/2019	144	100	53.5	1114	105.1	97.7	14.7	7.1	3.1	51	79	
10/14/2019	168	100	58.3	1131	102.7	94.5	4.1	0.6	0.8	85	80	4.5
10/21/2019	169	100	35.8	1138	111.2	102.1	6.3	2.6	0.8	59	87	
10/29/2019	191	99	53.3	1144	102.3	90.6	2.8	0.0	0.0	100	100	
11/4/2019	145	100	45.3	1128	104.3	96.4	4.1	0.0	0.0	100	100	
11/11/2019	167	100	62.5	1158	102.1	92.1	9.1	0.2	0.0	98	100	3.9
11/19/2019	191	100	42.6	1117	101.5	92.8	8.2	2.1	1.2	74	85	
11/26/2019	170	100	37.3	1174	100.7	90.8	15.8	0.4	0.1	98	99	
12/3/2019	169	100	67.2	1136	100.1	81.9	3.1	0.2	0.7	93	77	
12/10/2019	166	99	67.9	1189	100.0	82.3	3.0	0.2	0.1	94	98	
12/17/2019	170	100	36.8	1145	99.8	89.9	6.3	0.3	0.7	95	88	3.3
12/26/2019	215	99	71.1	1110	98.4	73.0	4.6	0.0	0.0	99	100	
12/30/2019	96	100	47.7	1118	98.1	79.8	5.0	0.6	0.3	89	94	
4th Qtr 2019 Average		**100**	**52.5**	**1137**	**102.0**	**89.7**	**6.6**	**1.1**	**0.6**	**84**	**91**	**3.9**
											Total Mass Removed 4th Qtr 2019	**11.7**
Compliance with SCAQMD Limits?				**YES**	**YES**				**YES**			
Carbon Changeout Required This Qtr?								**NO**		**NO**		

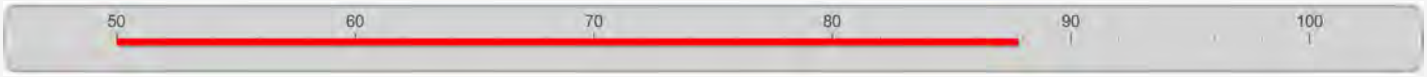
Notes:

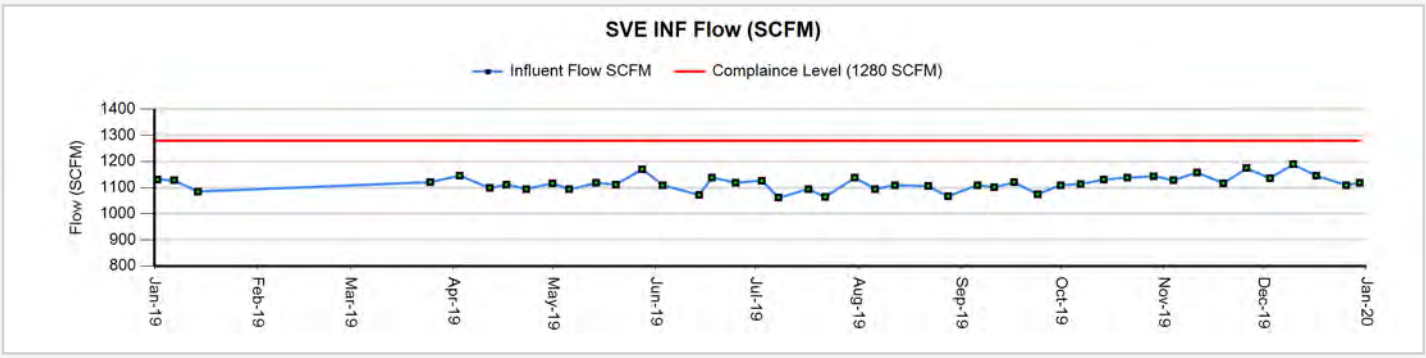
°F = degrees Fahrenheit
VGAC = vapor phase granular activated carbon
PID = photoionization detector
ppmv = parts per million by volume as hexane
SCFM = Standard Cubic Feet per Minute
Hr = Hour
Qtr = quarter
lbs = pounds
SCAQMD = South Coast Air Quality Management District

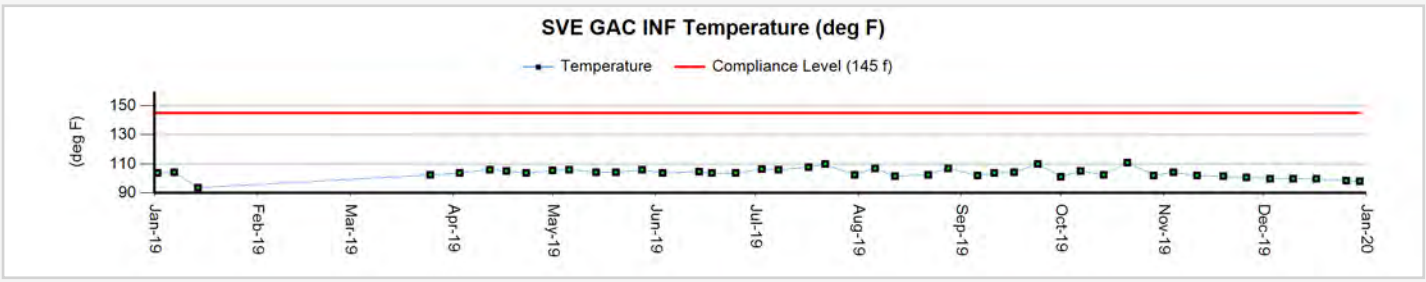
1. Lead VGAC efficiency is calculated by the PID readings between the influent and midpoint.
2. Overall VGAC efficiency is calculated by the PID readings between the influent and effluent.
3. Carbon changeouts are required when the efficiency across the lead VGAC vessel drops below 90% AND the midpoint concentration exceeds 50 ppmv as hexane, by PID during the same sampling event.
4. Limits are derived from the Health Risk Assessment (CDM Smith, 2015a).
5. Up Time is calculated as the percentage of time the system is operating between the date listed and the previous measurement date.

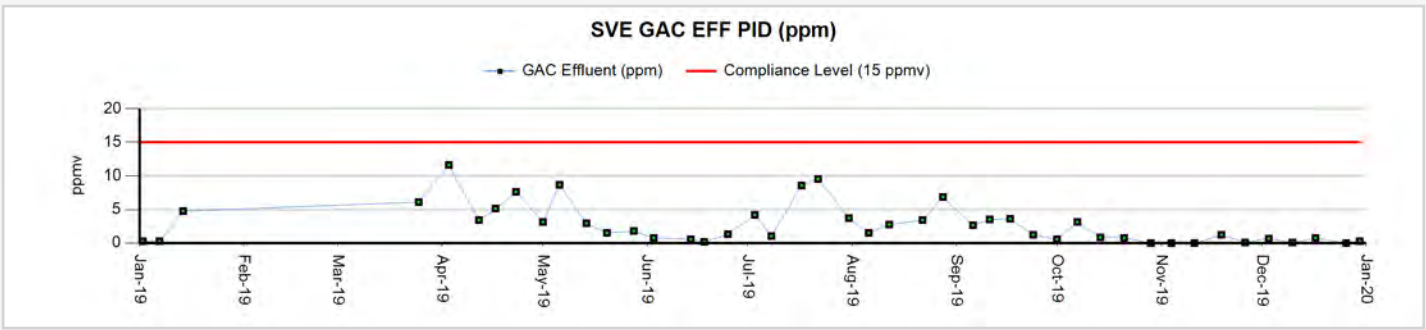
Attachment A, Figure A-1
OU-1 SVE System Operational Data (Rolling One Year)

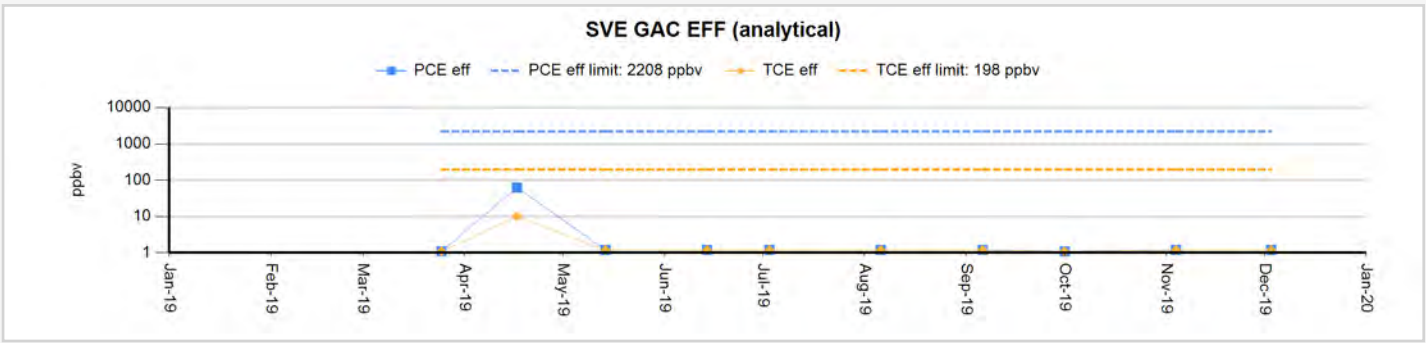
% Efficiency (PID) Across GAC Primary

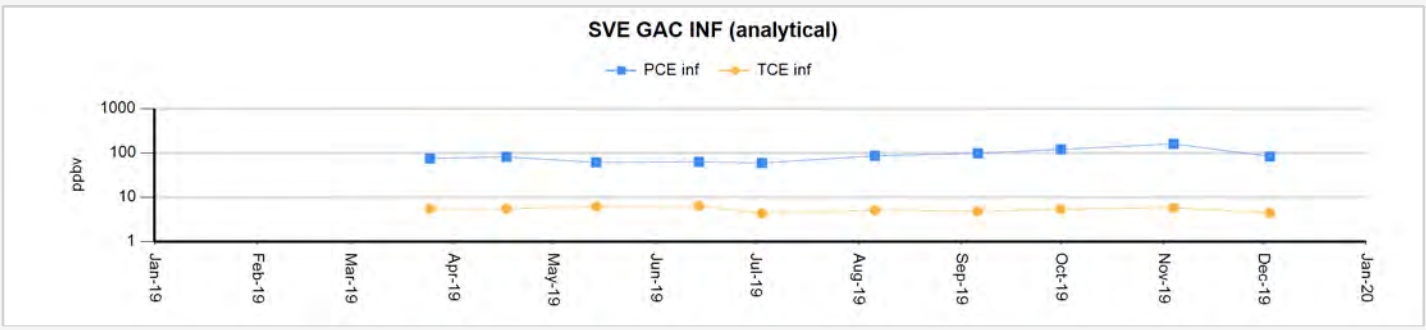












Kyle King

From: Reed, Alesandra F. <reedaf@cdmsmith.com>
Sent: Monday, February 03, 2020 10:14 AM
To: Kyle King; Laura Millan
Cc: Jaime Dinello; Bamer, Jeffrey
Subject: OU-1 SVE GAC evaluation October 2019
Attachments: Omega OU-1 SVE GAC Changeout Assessment_October 2019.xlsx

**** WARNING EXTERNAL SENDER ****

Team,

We evaluated the performance of the GAC used by the OU-1 SVE system for the month of October 2019, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of October, the OU-1 SVE system met the conditions presented in the HRA and is therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit.
- The OU-1 SVE system did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, determined that a voluntary changeout of the lead vessel GAC was not needed.

OU-1 SVE GAC Assessment – Based on Samples Collected October 1, 2019					
	Concentration (ppbv)				
Parameter	**Influent**	**Midpoint**	**Effluent**	**HRA Effluent Limit**	**Below 2015 HRA Limit?**
1,1,1-Trichloroethane (TCA)	6.5	ND	ND	34	Yes
1,1-Dichloroethane	ND	ND	ND	15	Yes
1,1-Dichloroethene	2.6	2.3	2	1,243	Yes
1,2-Dichloroethane	ND	ND	ND	14	Yes
Benzene	ND	ND	ND	65	Yes
Carbon disulfide	ND	ND	ND	1,007	Yes
Chloroform	ND	ND	ND	48	Yes
Freon 11	1.2	1.6	2.3	1,801	Yes
Freon 113	6.2	1.8	ND	9,799	Yes
Freon 12	ND	ND	ND	775	Yes
Isopropyl Alcohol (Isopropanol)	ND	ND	ND	60	Yes
Methyl ethyl ketone	46	43	56	75	Yes
Methylene chloride	ND	ND	ND	1,082	Yes

o-Xylene	ND	ND	ND	21	Yes
Tetrachloroethene (PCE)	120	ND	ND	2,208	Yes
TNMOC ref. to Heptane (MW=100)	470	94	92	17,405	Yes
Toluene	ND	ND	ND	47	Yes
Trichloroethene (TCE)	5.4	ND	ND	198	Yes
Vinyl chloride	ND	ND	ND	84	Yes

Please let us know if you have any questions or wish to discuss these data further.

Thanks!
Alesandra

Alesandra Reed, PE
Environmental Engineer
CDM Smith
555 17th Street, Suite 500, Denver, CO 80202
(cell) 352.222.2583, (office) 303.383.2475

Kyle King

From: Reed, Alesandra F. <reedaf@cdmsmith.com>
Sent: Monday, February 03, 2020 10:28 AM
To: Kyle King; Laura Millan
Subject: Omega OU-1 SVE November GAC Evaluation
Attachments: OU-1 SVE GAC Assessment_November 2019.xlsx

**** WARNING EXTERNAL SENDER ****

Team,

We evaluated the performance of the GAC used by the OU-1 SVE system for the month of November 2019, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of November, the OU-1 SVE system met the conditions presented in the HRA and was therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit.
- The OU-1 SVE system did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, determined that a voluntary changeout of the lead vessel GAC was not needed.

OU-1 SVE GAC Assessment – Based on Samples Collected November 4, 2019					
	Concentration (ppbv)				
Parameter	**Influent**	**Midpoint**	**Effluent**	**HRA Effluent Limit**	**Below 2015 HRA Limit?**
1,1,1-Trichloroethane (TCA)	8.6	ND	ND	34	Yes
1,1-Dichloroethane	ND	ND	ND	15	Yes
1,1-Dichloroethene	2.6	2.7	2.2	1,243	Yes
1,2-Dichloroethane	ND	ND	ND	14	Yes
Benzene	ND	ND	ND	65	Yes
Carbon disulfide	ND	ND	ND	1,007	Yes
Chloroform	ND	ND	ND	48	Yes
Freon 11	1.4	1.8	2.2	1,801	Yes
Freon 113	6	1.5	ND	9,799	Yes
Freon 12	ND	ND	ND	775	Yes
Isopropyl Alcohol (Isopropanol)	ND	ND	ND	60	Yes
Methyl ethyl ketone	ND	ND	68	75	Yes
Methylene chloride	ND	ND	ND	1,082	Yes
o-Xylene	ND	ND	ND	21	Yes

Tetrachloroethene (PCE)	160	1.2	ND	2,208	Yes
TNMOC ref. to Heptane (MW=100)	700	32	280	17,405	Yes
Toluene	ND	ND	ND	47	Yes
Trichloroethene (TCE)	5.8	ND	ND	198	Yes
Vinyl chloride	ND	ND	ND	84	Yes

Please let us know if you have any questions or wish to discuss these data further.

Thanks!
Alesandra

Alesandra Reed, PE
Environmental Engineer
CDM Smith
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(cell) 352.222.2583, (office) 303.383.2475

Kyle King

From: Reed, Alesandra F. <reedaf@cdmsmith.com>
Sent: Monday, February 03, 2020 10:17 AM
To: Kyle King; Laura Millan
Cc: Jaime Dinello; Bamer, Jeffrey
Subject: OU-1 SVE GAC evaluation December 2019
Attachments: Omega OU-1 SVE GAC Changeout Assessment_Dec 2019.xlsx

**** WARNING EXTERNAL SENDER ****

Team,

We evaluated the performance of the GAC used by the OU-1 SVE GAC system for the month of December 2019, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of December, the SVE GAC system met the conditions presented in the HRA and is therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit, as summarized in the table below.
- The SVE GAC system met the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA).
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, determined that a voluntary changeout of the lead vessel GAC was not needed.

OU-1 SVE GAC Assessment – Based on Samples Collected December 3, 2019					
	Concentration (ppbv)				
Parameter	**Influent**	**Midpoint**	**Effluent**	**HRA Effluent Limit**	**Below 2015 HRA Limit?**
1,1,1-Trichloroethane (TCA)	8.6	ND	ND	34	Yes
1,1-Dichloroethane	ND	ND	ND	15	Yes
1,1-Dichloroethene	2.2	2.1	2.8	1,243	Yes
1,2-Dichloroethane	ND	ND	ND	14	Yes
Benzene	ND	ND	ND	65	Yes
Carbon disulfide	ND	ND	ND	1,007	Yes
Chloroform	ND	ND	ND	48	Yes
Freon 11	1.5	1.5	2.2	1,801	Yes
Freon 113	5.9	1.8	1.4	9,799	Yes
Freon 12	ND	ND	ND	775	Yes
Isopropyl Alcohol (Isopropanol)	ND	ND	ND	60	Yes
Methyl ethyl ketone	17	12	14	75	Yes
Methylene chloride	ND	ND	ND	1,082	Yes

o-Xylene	ND	ND	ND	21	Yes
Tetrachloroethene (PCE)	83	ND	ND	2,208	Yes
TNMOC ref. to Heptane (MW=100)	420	41	54	17,405	Yes
Toluene	ND	ND	ND	47	Yes
Trichloroethene (TCE)	4.4	ND	ND	198	Yes
Vinyl chloride	ND	ND	ND	84	Yes

Please let us know if you have any questions or wish to discuss these data further.

Thanks!

Alesandra Reed, PE
Environmental Engineer
CDM Smith
555 17th Street, Suite 500, Denver, CO 80202
(cell) 352.222.2583, (office) 303.383.2475

ATTACHMENT B

Summary of VEW and DPE Concentrations and Operational Data

Attachment B, Table B-1
VEW / DPE Quarterly Operational Summary and Calculated Mass Removed
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

Location	Measurement Date	Shallow / Deep	Flow (SCFM)	PID (ppmv)	Analytical Total VOCs[2] (ug/m3)	Temperature (deg. F)	Vacuum (in H_2O, gauge)	Relative Humidity (%)	Calculated Mass Removed[1] (lbs)
VE-1S	10/1/2019	SHALLOW	18.0	0.4		86.9	-18.0	41.2	
	11/4/2019	SHALLOW	20.0	1.3	--	88.7	-16.0	16.2	--
	12/3/2019	SHALLOW	17.0	0.0		74.3	-20.0	58.1	
VE-5S	10/1/2019	SHALLOW	32.0	0.5		91.2	-35.0	30.1	
	11/4/2019	SHALLOW	36.0	0.1	--	95.4	-60.0	14.7	--
	12/3/2019	SHALLOW	--	0.0		75.9	-68.0	44.3	
VE-6S	10/1/2019	SHALLOW	66.0	0.4		90.8	-20.0	31.7	
	11/4/2019	SHALLOW	--	0.0	--	94.5	-36.0	10.6	--
	12/3/2019	SHALLOW	86.0	0.0		75.8	-26.0	42.7	
VE-8S	10/1/2019	SHALLOW	184.0	6.0		89.6	-35.0	30.2	
	11/4/2019	SHALLOW	223.0	1.5	--	92.3	-33.0	15.1	--
	12/3/2019	SHALLOW	178.0	0.0		76.0	-45.0	44.0	
VE-9S	10/1/2019	SHALLOW	44.0	0.3		88.9	-35.5	34.6	
	11/4/2019	SHALLOW	55.0	0.6	--	89.4	-38.0	12.7	--
	12/3/2019	SHALLOW	46.0	0.0		74.2	-45.0	48.5	
VE-10S	10/1/2019	SHALLOW	31.0	1.5		89.7	-36.0	33.9	
	11/4/2019	SHALLOW	38.0	0.4	--	90.8	-36.0	13.5	--
	12/3/2019	SHALLOW	79.0	0.0		76.2	-40.0	45.5	
VE-11S	10/1/2019	SHALLOW	97.0	0.4		90.9	-33.0	32.1	
	11/4/2019	SHALLOW	122.0	0.0	--	93.3	-27.0	15.3	--
	12/3/2019	SHALLOW	75.0	0.0		75.7	-34.0	46.1	
VE-12S	10/1/2019	SHALLOW	31.0	0.0		89.7	-31.0	35.2	
	11/4/2019	SHALLOW	39.0	0.0	--	90.4	-32.0	11.5	--
	12/3/2019	SHALLOW	43.0	2.1		75.0	-40.0	51.7	
VE-14S	10/14/2019	SHALLOW	41.0	4.4		79.1	-11.0	48.3	
	11/4/2019	SHALLOW	38.0	0.7	--	92.8	-14.0	17.4	--
	12/3/2019	SHALLOW	--	--		--	--	--	
VE-15S	10/14/2019	SHALLOW	23.0	3.7		78.1	-30.0	49.0	
	11/4/2019	SHALLOW	27.0	0.1	--	89.0	-30.0	12.3	--
	12/3/2019	SHALLOW	--	--		--	--	--	

Attachment B, Table B-1
VEW / DPE Quarterly Operational Summary and Calculated Mass Removed
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

Location	Measurement Date	Shallow / Deep	Flow (SCFM)	PID (ppmv)	Analytical Total VOCs[2] (ug/m3)	Temperature (deg. F)	Vacuum (in H_2O, gauge)	Relative Humidity (%)	Calculated Mass Removed[1] (lbs)
DPE-3	10/1/2019	DEEP	104.0	13.8		88.4	-32.0	32.6	
	11/4/2019	DEEP	108.0	9.1	--	87.2	-32.0	9.5	--
	12/3/2019	DEEP	146.0	0.7		73.8	-40.0	41.7	
DPE-4	10/1/2019	DEEP	80.0	1.0		88.2	-18.0	35.1	
	11/4/2019	DEEP	87.0	0.3	--	86.2	-18.0	13.6	--
	12/3/2019	DEEP	86.0	0.0		73.1	-22.0	52.3	
DPE-5	10/1/2019	DEEP	95.0	1.4		86.6	-38.0	28.7	
	11/4/2019	DEEP	100.0	0.4	--	82.9	-38.0	15.1	--
	12/3/2019	DEEP	102.0	0.0		72.3	-44.0	47.8	
DPE-8	10/1/2019	DEEP	74.0	1.8		88.4	-26.0	28.2	
	11/4/2019	DEEP	74.0	0.7	--	83.2	-24.0	20.2	--
	12/3/2019	DEEP	85.0	0.0		71.0	-30.0	52.5	
DPE-9	10/1/2019	DEEP	81.0	1.1		86.6	-20.0	42.4	
	11/4/2019	DEEP	82.0	0.4	--	84.0	-20.0	27.9	--
	12/3/2019	DEEP	85.0	0.0		70.8	-36.0	58.1	
VE-2D	10/1/2019	DEEP	77.0	144.3		89.7	-35.0	30.9	
	11/4/2019	DEEP	100.0	51.3	--	91.1	-25.3	13.5	--
	12/3/2019	DEEP	43.0	7.4		76.2	-30.7	45.5	
VE-14D	10/1/2019	DEEP	84.0	1.1		85.5	-22.0	37.8	
	11/4/2019	DEEP	88.0	0.3	--	83.7	-22.0	12.3	--
	12/3/2019	DEEP	90.0	0.0		72.3	-30.0	53.8	

Notes:

DPE = dual phase extraction

ppmv = parts per million by volume

VOC = volatile organic compound

F = Fahrenheit

SCFM = standard cubic feet per minute

Shallow = between 0 and 30 feet below ground surface

lbs = pounds

ug/m3 = micrograms per liter

Deep = between approximately 30 and 100 feet below ground surface

PID = photoionization detector

VE = vapor extraction

-- = Not measured

in H_2O, gauge = inches of water pressure, relative to atmospheric pressure; a negative gauge pressure is considered vaccum

1. Calculations are based on a subset of total VOC data from laboratory analyses of vapor samples, when collected, and measured flow rates from individual VEWs and the total system influent. Mass calculations are rounded to nearest 0.1 pound. If less than 0.05 pounds were calculated for the period, this will show as 0.0 pounds. VOCs that are not detected above the RLs are not included in the mass calculation. VEWs are not required to be sampled each quarter. If VEWs are sampled, it is based on operational considerations and to assist in mass calculations. All VEWs are sampled once per year.

2. A subset of VOC data used in mass removed calculations. TVOC concentrations are calculated using the detected concentrations from the following compounds: Tetrachloroethene (PCE), Trichloroethene (TCE), 1,1-Dichloroethene, Vinyl chloride, 1,1,1-Trichloroethane (TCA), 1,1-Dichloroethane, 1,2-Dichloroethane, Chloroform, Methylene chloride, Freon 11, Freon 12, Freon 113, Benzene, Toluene, o-Xylene, Carbon disulfide, Methyl ethyl ketone, Isopropyl Alcohol (Isopropanol), which account for approximately 98% of compounds in the data stream. Samples collected 8/13/2019, 8/14/2019, and 8/22/2019. Lab reports provided in Attachment F.

ATTACHMENT C

Summary of Vapor Monitoring Probe Concentrations and Vacuum

Attachment C, Table C-1
Shallow Vapor Monitoring Probe Vacuum Summary
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

Location	Monitoring Point Depth (feet bgs)	Vapor Extraction Well ROI[1]	Measurement Date	Vacuum[2,3] (in H_2O, gauge)
VE-1M	36[4]	VE-1S, VE-5S	11/7/2019	-0.57
VE-2S	22	VE-1S, VE-5S	11/7/2019	-0.11
VE-4S	22	VE-1S, VE-5S	11/7/2019	-0.24
VE-5M	36[4]	VE-5S	11/7/2019	-0.82
VE-7S	30	VE-8S	11/7/2019	-0.23
VMP-11	30	VE-10S, VE-12S	11/7/2019	-0.40
VMP-12	30	VE-10S, VE-11S	11/7/2019	-0.78
VMP-13	30	VE-31S	11/7/2019	-0.12
VMP-14	30		11/7/2019	-0.04
VMP-15	30	VE-10S, VE-9S	11/7/2019	-0.56
VMP-16	30	VE-11S	11/7/2019	-0.50
VMP-17	30		11/7/2019	-1.01
VMP-18	30	VE-15S	11/7/2019	-0.03
VMP-20	30	VE-5S, VE-8S	11/7/2019	-0.31
VMP-21	30	VE-15S	11/7/2019	-0.12
VMP-22	30		11/7/2019	-0.16
VMP-23	30		11/7/2019	-0.02
VMP-24	30		11/7/2019	-0.08
VMP-25	30		11/7/2019	0.00
VMP-26	30	VE-14S	11/7/2019	-0.03
VMP-27	30	VE-14S	11/7/2019	-0.02
VMP-31	6	VE-21S	11/7/2019	-0.01
	12	VE-21S	11/7/2019	-0.03
	24	VE-21S	11/7/2019	-0.06
VMP-32	6	VE-39S	11/7/2019	-0.02
	12	VE-39S	11/7/2019	-0.03
	24	VE-39S	11/7/2019	-0.05
VMP-43	6	VE-31S	11/7/2019	-1.31
	12	VE-31S	11/7/2019	-0.06
	24	VE-31S	11/7/2019	-1.64
VMP-94	6	VE-31S	11/7/2019	-0.03
	12	VE-31S	11/7/2019	-0.08
	24	VE-31S	11/7/2019	-0.19

Notes:

bgs = below ground surface -- = not measured,VMP was inaccessible

1. ROI = Estimated design radius of influence by the vapor extraction well (VEW) listed. If no VEW is listed, then the VMP is not within the design ROI of a VEW.

2. in H2O, gauge = inches of water pressure relative to atmospheric pressure. A negative gauge pressure is considered vacuum.

3. Yellow highlighted cells indicate a VMP within the design ROI of a VEW that did not meet the target vacuum of -0.1 in H2O at the time the monitoring was conducted.

4.These wells are considered part of shallow vapor monitoring as their well screen intervals are 26 - 36 feet below ground surface.

Attachment C, Table C-2
Deep Vapor Monitoring Probe Vacuum Summary
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

Location	Monitoring Point Depth (feet bgs)	Vapor Extraction Well ROI[1]	Measurement Date	Vacuum[2,3] (in H_2O, gauge)
VMP-1D	70	DPE-8	11/7/2019	-0.55
VMP-3D	70	VE-2D	11/7/2019	-0.09
VMP-4D	70	DPE-3, VE-2D	11/7/2019	-1.74
VMP-5	45	VE-2D	11/7/2019	-0.17
VMP-31	40	VE-6D	11/7/2019	0.00
	55	VE-6D	11/7/2019	-0.21
	60	VE-6D	11/7/2019	-0.30
	70	VE-6D	11/7/2019	-0.61
VMP-32	40	VE-10D	11/7/2019	-0.29
	55	VE-10D	11/7/2019	-0.28
	60	VE-10D	11/7/2019	-0.04
	70	VE-10D	11/7/2019	-0.06
VMP-92	50	DPE-5	11/7/2019	-0.10
	60	DPE-5	11/7/2019	-0.71
	70	DPE-5	11/7/2019	-0.39
VMP-93	50		11/7/2019	-0.87
	60		11/7/2019	-1.04
	70		11/7/2019	-0.04
VMP-94	40	DPE-4, VE-14D	11/7/2019	0.00
	50	DPE-4, VE-14D	11/7/2019	-0.39
	60	DPE-4, VE-14D	11/7/2019	-0.05
	70	DPE-4, VE-14D	11/7/2019	-0.85
VMP-95	50		11/7/2019	-0.27
	60		11/7/2019	-0.25
	70		11/7/2019	-1.40

Notes:

bgs = below ground surface

1. ROI = Estimated design radius of influence by the vapor extraction well (VEW) listed. If no VEW is listed, then the VMP is not within the design ROI of a VEW.

2. in H2O, gauge = inches of water pressure relative to atmospheric pressure. A negative gauge pressure is considered vacuum.

3. Yellow highlighted cells indicate a VMP within the design ROI of a VEW that did not meet the target vacuum of -0.1 in H2O at the time the monitoring was conducted.

Vacuum

- < -0.1 in H2O (gauge) at all depths
- > -0.1 in H2O (gauge) at some depths
- > -0.1 in H2O (gauge) at all depths
- no vacuum data available

- OU-1 Boundary
- Building Currently Commercially/Industrially Occupied
- Building Currently Vacant
- Former Omega Chemical Property Boundary

ddms
de maximis, inc.

Reviewed By: LM
Drawn By: KM
Date: 1/16/2020

Attachment C, Figure C-1
Vacuum Influence at Shallow Vapor Monitoring Probes
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

Vacuum

- achieves target vacuum at all depths
- achieves target vacuum at some depths
- does not achieve target vacuum
- no vacuum data available

- OU-1 Boundary
- Building Currently Commercially/Industrially Occupied
- Building Currently Vacant
- Former Omega Chemical Property Boundary

ddms
de maximis, inc.

Reviewed By: LM
Drawn By: KM
Date: 1/16/2020

Attachment C, Figure C-2
Vacuum Influence at
Deep Vapor Monitoring Probes
OU-1 Full Scale On-Site Soil Remedy,
Omega Chemical Superfund Site
Fourth Quarter 2019

ATTACHMENT D

Other Soil Gas Collected this Quarter

(Not Included this Quarter)

ATTACHMENT E

Field Forms

OMEGA
DAILY FIELD REPORT

Project Name: Omega Chemical	**Project #:** E742	**Date:** 11/7/19
Personnel: K. Schr, A. Yoo	**Sub Contractors:** -	
Arrival Time: 0600	**Departure Time:** 1400	**Hours on Site:** 8.0
Odometer (Start): -	**Odometer (End):** -	**Total Miles:** -
Task Description: OU-1 SVE OMM ☐ AOC SVE OMM ☐ GWCS OMM ☐		
Continue Qtrly GW gauging + Qtrly VMP monitoring		

Equipment List:

☐ Vacuum Meter	Type: Extech Manometer	Serial #: 2147350
☑ Vacuum Meter	Type: Fluke 922 Low-Range	Serial #: 98040163
☐ PID/FID	Type: MiniRAE 3000 OPOG or rental?	Serial #: 594-907978
☐ Sample Pump	Type: Thomas Pump/Lung Box	Serial #: 061000166406/003689
☐ Flow Meter	Type: Velocicalc 9565	Serial #: 9565P1531034
☑ Water Level Meter	Type: Solinst 101	Serial #: 48231
☐ Water Quality Meter	Type: _____	Serial #: _____
☐ Generator/Battery	Type: _____	Serial #: _____
☐ Other(s): _____		

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

0600 Arrive onsite. H+S. Mobilize delineators. Go to OW-8A/8B to block off area.
0615 Get paperwork ready. Upload DFR.
0635 Mobilize equipment. Calibrate PID (OPOG ppb): 0 ppb / 999 ppb Isobutylene.
0650 start GW gauging and VMP monitoring @ TP.

Client Signature (if applicable): _____ **Date:** _____

DAILY FIELD REPORT

Project Name: Omega Chemical	Project #: E742	Date: 11/7/19

1030 Finish monitoring @ TP. Collected pics of secondary pipe penetrations thrug all DPE vault walls. All are cemented around piping and vault wall. Continue VMP monitoring.

1330 Finish monitoring. Demobilize equipment.

1400 off site.

JHA ENVIRONMENTAL

DAILY SAFETY MEETING

Project Name: Omega Chemical **Date:** 11/7/19

Project Number: E742 **Presented by:** K. Azhar

Check the Topics/Information Reviewed:

- ☑ Safety is everyone's responsibility
- ☑ Accidents can be costly
- ☑ No horseplay
- ☑ Site health and safety plan reviewed
- ☑ Review emergency protocol
- ☑ Directions to hospital (PHA)
- ☑ Employee Right-To-Know/SDS location
- ☑ First aid, safety, and PPE location
- ☑ Safety glasses, hard hat, safety boots
- ☑ Fire extinguisher locations
- ☑ Daily work scope reviewed
- ☑ Strains and sprains
- ☑ Slips, trips, and falls
- ☑ Eye wash station locations
- ☑ Electrical ground fault
- ☑ Vehicle safety and driving/road conditions
- ☐ Public safety and fences
- ☑ Heat and cold stress
- ☑ Equipment and machinery familiarization
- ☐ Excavator swing and loading
- ☑ Decontamination steps
- ☑ Portable tool safety and awareness
- ☑ Orderly site and housekeeping
- ☑ Smoking in designated areas
- ☑ Parking and lay down area
- ☑ Leather gloves for protection
- ☑ Vehicle backing up hazards
- ☑ Sharp object, rebar, and scrap metal hazards
- ☑ Effects of the night before?
- ☑ Weather conditions (rain/snow)
- ☑ Latex gloves inner/nitrile gloves outer
- ☐ Vibration related injuries
- ☑ Open pits, excavations, and trenching hazards
- ☑ Noise hazards
- ☑ Dust and vapor control
- ☐ Excavation/trenching inspections/documentation
- ☐ Confined space entry – permit required
- ☐ Confined space entry – non-permit required
- ☐ Refueling procedures
- ☐ Full face respirators with proper cartridges
- ☐ Hot work permits
- ☑ Flying debris hazards
- ☐ Overhead utility locations cleared.
- ☑ Poison ivy/oak/sumac/insects/animals
- ☐ Upgrade to Level C at: PID (___ eV) >___ ppmv
- ☐ Work stoppage at: PID (___ eV) >___ ppmv, % LEL > 10%
- ☐ All underground utilities cleared?
- ☑ Flex-N-Stretch performed
- ☑ Anticipated visitors
- ☐ Temporary Power Lines
- ☐ Overhead Utilities
- ☐ Excavations/Trenches (competent person)
- ☐ Heavy Equipment Operations
- ☐ Overloaded Equipment (tipping)
- ☑ Heavy Lifting
- ☑ Traffic
- ☑ Exclusion Zones
- ☑ Uneven Terrain
- ☑ Chemicals
- ☑ Flammability
- ☑ Wet Surfaces
- ☑ Ladder Safety
- ☑ Pinch Points
- ☐ Unexploded Ordnance (UXO) Hazard
- ☑ Daily Vehicle Walkaround/Instpection

Other Discussion Items/Comments/Follow-up Actions: Stay hydrated

JHA Site Health and Safety Officer (SHSO) of the day: Khalid Azhar

NAME	SIGNATURE	COMPANY
Anwakel Yoo		JHA
Khalid Azhar		JHA

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities
- Complete form, obtain signatures, and file with the Daily Summary
- Follow-up on any noted items and document resolution of any action items.

OMEGA
DAILY FIELD REPORT

Project Name: Omega Chemical	**Project #:** E742	**Date:** 11/7/19
Personnel: K. Schr, A. Yoo	**Sub Contractors:** -	
Arrival Time: 0600	**Departure Time:** 1400	**Hours on Site:** 8.0
Odometer (Start): -	**Odometer (End):** -	**Total Miles:** -
Task Description: OU-1 SVE OMM ☐ AOC SVE OMM ☐ GWCS OMM ☐		
Continue Qtrly GW gauging + Qtrly VMP monitoring		

Equipment List:

☐ Vacuum Meter	Type: Extech Manometer	Serial #: 2147350
☑ Vacuum Meter	Type: Fluke 922 Low-Range	Serial #: 98040163
☐ PID/FID	Type: MiniRAE 3000 OPOG or rental?	Serial #: 594-907978
☐ Sample Pump	Type: Thomas Pump/Lung Box	Serial #: 061000166406/003689
☐ Flow Meter	Type: Velocicalc 9565	Serial #: 9565P1531034
☑ Water Level Meter	Type: Solinst 101	Serial #: 48231
☐ Water Quality Meter	Type: _____	Serial #: _____
☐ Generator/Battery	Type: _____	Serial #: _____
☐ Other(s): _____		

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

0600 Arrive onsite. H+S. Mobilize delineators. Go to OW-8A/8B to block off area.
0615 Get paperwork ready. Upload DFR.
0635 Mobilize equipment. Calibrate PID (OPOG ppb): 0 ppb / 999 ppb Isobutylene.
0650 start GW gauging and VMP monitoring @ TP.

Client Signature (if applicable): _____ **Date:** _____

DAILY FIELD REPORT

Project Name: Omega Chemical	Project #: E742	Date: 11/7/19

1030 Finish monitoring @ TP. Collected pics of secondary pipe penetrations thrug all DPE vault walls. All are cemented around piping and vault wall. Continue VMP monitoring.

1330 Finish monitoring. Demobilize equipment.

1400 off site.

JHA ENVIRONMENTAL

DAILY SAFETY MEETING

Project Name: Omega Chemical **Date:** 11/7/19

Project Number: E742 **Presented by:** K. Azhar

Check the Topics/Information Reviewed:

- ☑ Safety is everyone's responsibility
- ☑ Accidents can be costly
- ☑ No horseplay
- ☑ Site health and safety plan reviewed
- ☑ Review emergency protocol
- ☑ Directions to hospital (PHA)
- ☑ Employee Right-To-Know/SDS location
- ☑ First aid, safety, and PPE location
- ☑ Safety glasses, hard hat, safety boots
- ☑ Fire extinguisher locations
- ☑ Daily work scope reviewed
- ☑ Strains and sprains
- ☑ Slips, trips, and falls
- ☑ Eye wash station locations
- ☑ Electrical ground fault
- ☑ Vehicle safety and driving/road conditions
- ☐ Public safety and fences
- ☑ Heat and cold stress
- ☑ Equipment and machinery familiarization
- ☐ Excavator swing and loading
- ☑ Decontamination steps
- ☑ Portable tool safety and awareness
- ☑ Orderly site and housekeeping
- ☑ Smoking in designated areas
- ☑ Parking and lay down area
- ☑ Leather gloves for protection
- ☑ Vehicle backing up hazards
- ☑ Sharp object, rebar, and scrap metal hazards
- ☑ Effects of the night before?
- ☑ Weather conditions (rain/snow)
- ☑ Latex gloves inner/nitrile gloves outer
- ☐ Vibration related injuries
- ☑ Open pits, excavations, and trenching hazards
- ☑ Noise hazards
- ☑ Dust and vapor control
- ☐ Excavation/trenching inspections/documentation
- ☐ Confined space entry – permit required
- ☐ Confined space entry – non-permit required
- ☐ Refueling procedures
- ☐ Full face respirators with proper cartridges
- ☐ Hot work permits
- ☑ Flying debris hazards
- ☐ Overhead utility locations cleared.
- ☑ Poison ivy/oak/sumac/insects/animals
- ☐ Upgrade to Level C at: PID (___ eV) >___ ppmv
- ☐ Work stoppage at: PID (___ eV) >___ ppmv, % LEL > 10%
- ☐ All underground utilities cleared?
- ☑ Flex-N-Stretch performed
- ☑ Anticipated visitors
- ☐ Temporary Power Lines
- ☐ Overhead Utilities
- ☐ Excavations/Trenches (competent person)
- ☐ Heavy Equipment Operations
- ☐ Overloaded Equipment (tipping)
- ☑ Heavy Lifting
- ☑ Traffic
- ☑ Exclusion Zones
- ☑ Uneven Terrain
- ☑ Chemicals
- ☑ Flammability
- ☑ Wet Surfaces
- ☑ Ladder Safety
- ☑ Pinch Points
- ☐ Unexploded Ordnance (UXO) Hazard
- ☑ Daily Vehicle Walkaround/Instpection

Other Discussion Items/Comments/Follow-up Actions: Stay hydrated

JHA Site Health and Safety Officer (SHSO) of the day: Khalid Azhar

NAME	SIGNATURE	COMPANY
Anwakel Yoo		JHA
Khalid Azhar		JHA

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities
- Complete form, obtain signatures, and file with the Daily Summary
- Follow-up on any noted items and document resolution of any action items.

VAPOR PROBE MONITORING FORM

Omega - OU1 and AOC VMP Monitoring

Date: 11/7/19

Technician: K. Azhar, A. Too

WELL ID	Depth (ft bgs)	Well Diameter (inches)	Purge Time (min)	Date	Time	Observed Vacuum ("H_2O)	Sample Taken? (Y/N)	CDM Smith Review Comments
BISHOP CO. 12519 Putnam St, Whittier, CA								
VMP-23	30	4	8	11/7	0734	-0.029	N	Should be collected
VMP-24	31.5	4	8	↓	0732	-0.080	N	Should be collected
VMP-25	31.5	4	8	↓	0736	Ø	N	Should be collected
FRED R. RIPPY 12471 Washington Blvd, Whittier, CA								
FRR-VMP-1-6	6	0.25	1					AOC off, don't collect
FRR-VMP-1-12	12	0.25	1					AOC off, don't collect
FRR-VMP-4-6	6	0.25	1					AOC off, don't collect
FRR-VMP-4-12	12	0.25	1					AOC off, don't collect
FRR-VMP-7-6	6	0.25	1					AOC off, don't collect
FRR-VMP-7-12	12	0.25	1					AOC off, don't collect
FRR-VMP-10-2	2	0.25	1					AOC off, don't collect
FRR-VMP-10-6	6	0.25	1					AOC off, don't collect
FRR-VMP-13-6	6	0.25	1					AOC off, don't collect
FRR-VMP-13-12	12	0.25	1					AOC off, don't collect
KAISER PERMANENTE MEDICAL OFFICES 12470 Whittier Blvd, Whittier, CA								
VMP-43-6	6	0.25	1	11/7	0753	-1.309	N	
VMP-43-12	12	0.25	1	↓	0758	-0.055	↓	
VMP-43-24	24	0.25	1	↓	0756	-1.641	↓	
VMP-94-6	6	0.25	1	↓	0741	-0.030	↓	
VMP-94-11.	11	0.25	1	↓	0743	-0.084	↓	
VMP-94-24	24	0.25	1	↓	0744	-0.185	↓	
VMP-94-40	40	0.25	1	↓	0745	-0.004	↓	
VMP-94-50	50	0.25	1	↓	0747	-0.391	↓	
VMP-94-60	60	0.25	1	↓	0748	-0.051	↓	
VMP-94-69.5	69.5	0.25	1	↓	0749	-0.846	↓	
VMP-95-51	51	0.25	1	↓	0800	-0.265	↓	
VMP-95-61	61	0.25	1	↓	0802	-0.247	↓	
VMP-95-69.5	69.5	0.25	1	↓	0801	-1.396	↓	
MEDLIN & SONS ENGINEERING 12484 Whittier Blvd, Whittier, CA								
VMP-40-6	6	0.25	1					Not needed, per Kyle's comment
VMP-40-12	12	1	1					Not needed, per Kyle's comment
VMP-40-24	24	0.25	1					Not needed, per Kyle's comment
VMP-40-55	55	0.25	1					Not needed, per Kyle's comment
VMP-40-70	70	0.25	1					Not needed, per Kyle's comment
VMP-41-6	6	0.25	1					Not needed, per Kyle's comment
VMP-41-12	12	0.25	1					Not needed, per Kyle's comment
VMP-41-24	24	0.25	1					Not needed, per Kyle's comment
VMP-41-55	55	1	1					Not needed, per Kyle's comment
MERCHANT METALS (FORMER) 12482 Putnam St, Whittier, CA								
VMP-44-12	12	0.25	1					AOC off, don't collect
VMP-44-24	24	0.25	1					AOC off, don't collect
VMP-86-12	12	0.25	1					AOC off, don't collect
VMP-86-24	24	0.25	1					AOC off, don't collect

VAPOR PROBE MONITORING FORM

Omega - OU1 and AOC VMP Monitoring

Date: 11/7/19 Technician: K. Azhar, A. Too

WELL ID	Depth (ft bgs)	Well Diameter (inches)	Purge Time (min)	Date	Time	Observed Vacuum ("H_2O)	Sample Taken? (Y/N)	CDM Smith Review Comments
VMP-87-12	12	0.25	1					AOC off, don't collect
VMP-87-24	24	0.25	1					AOC off, don't collect
VMP-88-12	12	0.25	1					AOC off, don't collect
VMP-88-24	24	0.25	1					AOC off, don't collect
ROP AND WCCS (FORMER) 12519 Washington Blvd, Whittier, CA								
VMP-31-6	6	0.25	1	11/7	0816	-0.012	N	
VMP-31-12	12	0.25	1		0818	-0.026		
VMP-31-24	24	0.25	1		0817	-0.060		
VMP-31-40	40	0.25	1		0818	Ø		
VMP-31-55	55	1	1		1041	-0.206		
VMP-31-60	60	0.25	1		0827	-0.298		
VMP-31-70	70	0.25	1		0823	-0.611		
VMP-32-6	6	0.25	1		0812	-0.017		
VMP-32-12	12	0.25	1		0813	-0.030		
VMP-32-24	24	0.25	1		0814	-0.048		
VMP-32-40	40	0.25	1		0809	-0.290		
VMP-32-55	55	1	1		1039	-0.283		
VMP-32-60	60	0.25	1		0810	-0.041		
VMP-32-70	70	0.25	1		0811	-0.056		
SKATELAND (FORMER) 12520 Whittier Blvd, Whittier, CA								
VMP-18	30	4	8	11/7	1305	-0.030		
VMP-39-6	6	0.25	1					Not needed, per Kyle's comment
VMP-39-12	12	0.25	1					Not needed, per Kyle's comment
VMP-39-24	24	0.25	1					Not needed, per Kyle's comment
VMP-39-55	55	1	1					Not needed, per Kyle's comment
VMP-84-6	6	0.25	1					Not needed, per Kyle's comment
VMP-84-12	12	0.25	1					Not needed, per Kyle's comment
VMP-84-24	24	0.25	1					Not needed, per Kyle's comment
VMP-84-40	40	0.25	1					Not needed, per Kyle's comment
VMP-84-50	50	1	1					Not needed, per Kyle's comment
VMP-84-60	60	0.25	1					Not needed, per Kyle's comment
STAR CITY AUTO BODY 12504 Whittier Blvd, Whittier, CA								
VE-7S	30	4	4	11/7	1155	~~-0.023~~ -0.238	N	
VMP-3D	70	4	3		1150	-0.087		Cap off for optimization efforts
VMP-4D	70	4	3		1157	-1.744		" " " "
VMP-5	45	1	3		1153	-0.169		
VMP-22	31.5	4	8		1147	-0.159		
TERRA PAVE 12511 Putnam St, Whittier, CA								
VMP-11	30	4	8	11/7	0902	-0.395	N	
VMP-12	31.5	4	8		0904	-0.780		
VMP-13	31.5	4	8		0932	-0.120		
VMP-14	31.5	4	8		0941	-0.036		
VMP-15	31.5	4	8		0859	-0.559		
VMP-16	31.5	4	8		0931	-0.295		

VAPOR PROBE MONITORING FORM

Omega - OU1 and AOC VMP Monitoring

Date: 11/7/19

Technician: K. Ashe, A. Too

WELL ID	Depth (ft bgs)	Well Diameter (inches)	Purge Time (min)	Date	Time	Observed Vacuum ("H_2O)	Sample Taken? (Y/N)	CDM Smith Review Comments
VMP-17	31.5	4	8	11/7	0915	-1.010	N	

VAPOR PROBE MONITORING FORM

Omega - OU1 and AOC VMP Monitoring

Date: 11/7/19 **Technician:** K. Azhar, A. Tao

WELL ID	Depth (ft bgs)	Well Diameter (inches)	Purge Time (min)	Date	Time	Observed Vacuum ("H_2O)	Sample Taken? (Y/N)	CDM Smith Review Comments
VMP-92-51.5	51.5	0.25	1	11/7	0909	-0.104	N	
VMP-92-62	62	0.25	1		0907	-0.714		
VMP-92-68.5	68.5	0.25	1		0912	-0.386		
VMP-93-50	50	0.25	1		0920	-0.872		
VMP-93-60	60	0.25	1		0925	-1.040		
VMP-93-69.5	69.5	0.25	1		0926	-0.041		
THREE KINGS CONSTRUCTION (FORMER) 12512 Whittier Blvd, Whittier, CA								
VE-1M	36.5	4	4	11/7	1224	-0.569	N	
VE-2S	23	4	4		1223	-0.109		
VE-4S	22.5	4	4		1225	-0.241		
VE-5M	36.5	4	4		1230	-0.819		
VMP-1D	70	4	3		1227	-0.550		
VMP-20	31.5	4	8		1231	-0.305		
VMP-21	31.5	4	8		1219	-0.117		
VMP-26	30.5	4	8		1221	-0.031		
VMP-27	30	4	8		1237	-0.020		

ATTACHMENT F

Laboratory Analytical Results

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10/10/2019
Ms. Jaime Dinello
DeMaximis, Inc
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - OU1 SVE Monthly GAC Sampling
Project #:
Workorder #: 1910127

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 10/3/2019 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1910127

Work Order Summary

CLIENT:	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	**BILL TO:**	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
PHONE:	949.679.9290	**P.O. #**	
FAX:	949.679.9078	**PROJECT #**	Omega - OU1 SVE Monthly GAC Sampling
DATE RECEIVED:	10/03/2019	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	10/09/2019		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OC_SVE_EFF_GAC_100119	TO-15	2.6 "Hg	14.8 psi
02A	OC_SVE_MID_GAC_100119	TO-15	4.7 "Hg	15.3 psi
03A	OC_SVE_INF_GAC_100119	TO-15	4.3 "Hg	15.9 psi
04A	Lab Blank	TO-15	NA	NA
04B	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
05B	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA
06B	LCS	TO-15	NA	NA
06BB	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 10/09/19

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP – CA009332019-11, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-011, Effective date: 10/18/2018, Expiration date: 10/17/2019.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
DeMaximis, Inc
Workorder# 1910127

Three 1 Liter Summa Canister samples were received on October 03, 2019. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The TNOMC concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of TNMOC ref. to Heptane (MW=100).

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC_SVE_EFF_GAC_100119

Lab ID#: 1910127-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.1	2.3	6.2	13
1,1-Dichloroethene	1.1	2.0	4.4	8.1
2-Butanone (Methyl Ethyl Ketone)	4.4	56	13	160
TNMOC ref. to Heptane (MW=100)	22	92	90	380

Client Sample ID: OC_SVE_MID_GAC_100119

Lab ID#: 1910127-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	1.6	6.8	9.1
Freon 113	1.2	1.8	9.3	14
1,1-Dichloroethene	1.2	2.3	4.8	9.2
2-Butanone (Methyl Ethyl Ketone)	4.8	43	14	130
TNMOC ref. to Heptane (MW=100)	24	94	99	380

Client Sample ID: OC_SVE_INF_GAC_100119

Lab ID#: 1910127-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	1.2	6.8	6.9
Freon 113	1.2	6.2	9.3	48
1,1-Dichloroethene	1.2	2.6	4.8	10
2-Butanone (Methyl Ethyl Ketone)	4.9	46	14	140
1,1,1-Trichloroethane	1.2	6.5	6.6	36
Trichloroethene	1.2	5.4	6.5	29
Tetrachloroethene	1.2	120	8.2	850
TNMOC ref. to Heptane (MW=100)	24	470	99	1900

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Client Sample ID: OC_SVE_EFF_GAC_100119

Lab ID#: 1910127-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100721**	**Date of Collection: 10/1/19 10:46:00 AM**	
Dil. Factor:	**2.20**	**Date of Analysis: 10/7/19 10:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.4	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
Freon 11	1.1	2.3	6.2	13
Freon 113	1.1	Not Detected	8.4	Not Detected
1,1-Dichloroethene	1.1	2.0	4.4	8.1
2-Propanol	4.4	Not Detected	11	Not Detected
Carbon Disulfide	4.4	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.4	56	13	160
Chloroform	1.1	Not Detected	5.4	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.9	Not Detected
Benzene	1.1	Not Detected	3.5	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	Not Detected	5.9	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Toluene	1.1	Not Detected	4.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Tetrachloroethene	1.1	Not Detected	7.5	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
TNMOC ref. to Heptane (MW=100)	22	92	90	380

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: OC_SVE_MID_GAC_100119

Lab ID#: 1910127-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100722**	**Date of Collection:**	**10/1/19 10:47:00 AM**
Dil. Factor:	**2.42**	**Date of Analysis:**	**10/7/19 11:24 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	1.6	6.8	9.1
Freon 113	1.2	1.8	9.3	14
1,1-Dichloroethene	1.2	2.3	4.8	9.2
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	43	14	130
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
TNMOC ref. to Heptane (MW=100)	24	94	99	380

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: OC_SVE_INF_GAC_100119

Lab ID#: 1910127-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100818**	**Date of Collection: 10/1/19 10:46:00 AM**	
Dil. Factor:	**2.43**	**Date of Analysis: 10/8/19 10:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	1.2	6.8	6.9
Freon 113	1.2	6.2	9.3	48
1,1-Dichloroethene	1.2	2.6	4.8	10
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	4.9	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.9	46	14	140
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	6.5	6.6	36
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	5.4	6.5	29
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	120	8.2	850
o-Xylene	1.2	Not Detected	5.3	Not Detected
TNMOC ref. to Heptane (MW=100)	24	470	99	1900

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1910127-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100705**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/7/19 11:19 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1910127-04B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100807**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/8/19 02:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: CCV

Lab ID#: 1910127-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100702**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/7/19 09:57 AM**	

Compound	%Recovery
Freon 12	89
Vinyl Chloride	98
Freon 11	92
Freon 113	92
1,1-Dichloroethene	98
2-Propanol	95
Carbon Disulfide	98
Methylene Chloride	103
Hexane	99
1,1-Dichloroethane	98
2-Butanone (Methyl Ethyl Ketone)	106
Chloroform	98
1,1,1-Trichloroethane	92
Carbon Tetrachloride	91
Benzene	102
1,2-Dichloroethane	87
Trichloroethene	96
1,4-Dioxane	98
Toluene	97
1,1,2-Trichloroethane	98
Tetrachloroethene	98
o-Xylene	98
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: CCV

Lab ID#: 1910127-05B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100802**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/8/19 10:43 AM**	

Compound	%Recovery
Freon 12	88
Vinyl Chloride	100
Freon 11	91
Freon 113	93
1,1-Dichloroethene	98
2-Propanol	95
Carbon Disulfide	96
Methylene Chloride	100
Hexane	98
1,1-Dichloroethane	99
2-Butanone (Methyl Ethyl Ketone)	100
Chloroform	96
1,1,1-Trichloroethane	90
Carbon Tetrachloride	92
Benzene	102
1,2-Dichloroethane	89
Trichloroethene	98
1,4-Dioxane	101
Toluene	100
1,1,2-Trichloroethane	98
Tetrachloroethene	98
o-Xylene	97
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: LCS

Lab ID#: 1910127-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100703**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/7/19 10:24 AM**	

Compound	%Recovery	Method Limits
Freon 12	88	70-130
Vinyl Chloride	98	70-130
Freon 11	88	70-130
Freon 113	90	70-130
1,1-Dichloroethene	94	70-130
2-Propanol	95	70-130
Carbon Disulfide	95	70-130
Methylene Chloride	96	70-130
Hexane	99	70-130
1,1-Dichloroethane	93	70-130
2-Butanone (Methyl Ethyl Ketone)	103	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	90	70-130
Carbon Tetrachloride	91	70-130
Benzene	99	70-130
1,2-Dichloroethane	86	70-130
Trichloroethene	96	70-130
1,4-Dioxane	104	70-130
Toluene	97	70-130
1,1,2-Trichloroethane	96	70-130
Tetrachloroethene	97	70-130
o-Xylene	100	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: LCSD

Lab ID#: 1910127-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100704**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/7/19 10:51 AM**	

Compound	%Recovery	Method Limits
Freon 12	87	70-130
Vinyl Chloride	99	70-130
Freon 11	89	70-130
Freon 113	91	70-130
1,1-Dichloroethene	92	70-130
2-Propanol	94	70-130
Carbon Disulfide	96	70-130
Methylene Chloride	94	70-130
Hexane	97	70-130
1,1-Dichloroethane	94	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
Chloroform	93	70-130
1,1,1-Trichloroethane	90	70-130
Carbon Tetrachloride	91	70-130
Benzene	102	70-130
1,2-Dichloroethane	89	70-130
Trichloroethene	97	70-130
1,4-Dioxane	105	70-130
Toluene	99	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	99	70-130
o-Xylene	100	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCS

Lab ID#: 1910127-06B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100803**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/8/19 11:09 AM**	

Compound	%Recovery	Method Limits
Freon 12	91	70-130
Vinyl Chloride	101	70-130
Freon 11	90	70-130
Freon 113	92	70-130
1,1-Dichloroethene	94	70-130
2-Propanol	97	70-130
Carbon Disulfide	98	70-130
Methylene Chloride	98	70-130
Hexane	100	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	105	70-130
Chloroform	97	70-130
1,1,1-Trichloroethane	92	70-130
Carbon Tetrachloride	94	70-130
Benzene	99	70-130
1,2-Dichloroethane	87	70-130
Trichloroethene	96	70-130
1,4-Dioxane	103	70-130
Toluene	98	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	100	70-130
o-Xylene	100	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCSD

Lab ID#: 1910127-06BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17100804**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 10/8/19 11:36 AM**	

Compound	%Recovery	Method Limits
Freon 12	88	70-130
Vinyl Chloride	97	70-130
Freon 11	88	70-130
Freon 113	90	70-130
1,1-Dichloroethene	92	70-130
2-Propanol	94	70-130
Carbon Disulfide	96	70-130
Methylene Chloride	94	70-130
Hexane	97	70-130
1,1-Dichloroethane	93	70-130
2-Butanone (Methyl Ethyl Ketone)	104	70-130
Chloroform	93	70-130
1,1,1-Trichloroethane	91	70-130
Carbon Tetrachloride	90	70-130
Benzene	104	70-130
1,2-Dichloroethane	89	70-130
Trichloroethene	100	70-130
1,4-Dioxane	107	70-130
Toluene	101	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	98	70-130
o-Xylene	99	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	98	70-130

1910127

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

AIR CHAIN OF CUSTODY RECORD

DATE: 10/01/19
PAGE: 1 OF 1

LABORATORY CLIENT: de maximis
ADDRESS: 1322 Scott St., Suite 104
CITY: San Diego STATE: CA ZIP: 92106
TEL: (562) 756-8149 EMAIL: jdinello@demaximis.com
TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAYS ☐ 10 DAYS
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☑ EDD
SPECIAL INSTRUCTIONS:

CLIENT PROJECT NAME / NUMBER: Omega - OU1 SVE Monthly GAC Sampling
PROJECT ADDRESS: 12520 Whittier Blvd.
CITY: Whittier STATE: CA ZIP: 90602
PROJECT CONTACT: Trent henderson thenderson@jacobandhefner.com
SAMPLER(S): (NAME / SIGNATURE) Khalid Azhar

P.O. NO.:
LAB CONTACT OR QUOTE NO.:
LAB USE ONLY ☐☐-☐☐☐☐

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type: (I) Indoor (SV) Soil Vap. (A) Ambient	Sampling Equipment Info: Canister ID#	Canister Size 6L or 1L	Flow Controller ID#	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	TO-15 (TAL 2.3)				
1	OC_SVE_EFF_GAC_100119	SP-EFF-GAC	SV	L12428	1 L	23277	10/1/2019	1042	-26	10/1/2019	1046	-2	X				
2	OC_SVE_MID_GAC_100119	SP-MID-GAC	SV	L11566	1 L	23283	10/1/2019	1043	-26	10/1/2019	1047	-5	X				
3	OC_SVE_INF_GAC_100119	SP-INF-GAC	SV	L12651	1 L	24273	10/1/2019	1043	-26	10/1/2019	1046	-3	X				
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	

01A
02A
03A

Relinquished by: (Signature)
Received by: (Signature) TAT
Date: 10/3/19 Time: 0940

Relinquished by: (Signature)
Received by: (Signature)
Date: Time:

Relinquished by: (Signature)
Received by: (Signature)
Date: Time:

Custody Seal Intact?
Y N None Temp NA
770EX

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11/15/2019
Ms. Jaime Dinello
DeMaximis, Inc
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - OU1 SVE Monthly GAC Sampling
Project #:
Workorder #: 1911148

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 11/7/2019 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

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WORK ORDER #: 1911148

Work Order Summary

CLIENT:	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	**BILL TO:**	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
PHONE:	949.679.9290	**P.O. #**	
FAX:	949.679.9078	**PROJECT #**	Omega - OU1 SVE Monthly GAC Sampling
DATE RECEIVED:	11/07/2019	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	11/14/2019		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OC_SVE_EFF_GAC_110419	TO-15	5.5 "Hg	15 psi
02A	OC_SVE_MID_GAC_110419	TO-15	5.0 "Hg	15 psi
03A	OC_SVE_INF_GAC_110419	TO-15	6.0 "Hg	15 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 11/14/19

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP – CA009332019-11, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-011, Effective date: 10/18/2019, Expiration date: 10/17/2020.
Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
EPA Method TO-15
DeMaximis, Inc
Workorder# 1911148

Three 1 Liter Summa Canister samples were received on November 07, 2019. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

The samples arrived at the laboratory without a Chain of Custody (COC). The client subsequently provided the COC by e-mail on 11/08/19.

The Chain of Custody (COC) was not relinquished properly. A signature, date and time were not provided by the field sampler.

Analytical Notes

The TNMOC concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of TNMOC ref. to Heptane (MW=100).

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC_SVE_EFF_GAC_110419

Lab ID#: 1911148-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	2.2	6.9	12
1,1-Dichloroethene	1.2	2.2	4.9	8.7
2-Butanone (Methyl Ethyl Ketone)	4.9	68	14	200
TNMOC ref. to Heptane (MW=100)	25	280	100	1100

Client Sample ID: OC_SVE_MID_GAC_110419

Lab ID#: 1911148-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	1.8	6.8	10
Freon 113	1.2	1.5	9.3	12
1,1-Dichloroethene	1.2	2.7	4.8	10
Tetrachloroethene	1.2	1.2	8.2	8.4
TNMOC ref. to Heptane (MW=100)	24	32	99	130

Client Sample ID: OC_SVE_INF_GAC_110419

Lab ID#: 1911148-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.3	1.4	7.1	8.0
Freon 113	1.3	6.0	9.6	46
1,1-Dichloroethene	1.3	2.6	5.0	10
Hexane	1.3	24	4.4	84
1,1,1-Trichloroethane	1.3	8.6	6.9	47
Trichloroethene	1.3	5.8	6.8	31
Tetrachloroethene	1.3	160	8.5	1100
TNMOC ref. to Heptane (MW=100)	25	700	100	2900

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Client Sample ID: OC_SVE_EFF_GAC_110419

Lab ID#: 1911148-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17111208**	**Date of Collection:**	**11/4/19 11:18:00 AM**
Dil. Factor:	**2.47**	**Date of Analysis:**	**11/12/19 01:07 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	2.2	6.9	12
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethene	1.2	2.2	4.9	8.7
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	4.9	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.9	68	14	200
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	Not Detected	8.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
TNMOC ref. to Heptane (MW=100)	25	280	100	1100

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: OC_SVE_MID_GAC_110419

Lab ID#: 1911148-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17111209**	**Date of Collection:**	**11/4/19 11:28:00 AM**
Dil. Factor:	**2.42**	**Date of Analysis:**	**11/12/19 01:35 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	1.8	6.8	10
Freon 113	1.2	1.5	9.3	12
1,1-Dichloroethene	1.2	2.7	4.8	10
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	Not Detected	14	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	1.2	8.2	8.4
o-Xylene	1.2	Not Detected	5.2	Not Detected
TNMOC ref. to Heptane (MW=100)	24	32	99	130

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: OC_SVE_INF_GAC_110419

Lab ID#: 1911148-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17111219**	**Date of Collection:**	**11/4/19 11:36:00 AM**
Dil. Factor:	**2.52**	**Date of Analysis:**	**11/12/19 06:47 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.2	Not Detected
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
Freon 11	1.3	1.4	7.1	8.0
Freon 113	1.3	6.0	9.6	46
1,1-Dichloroethene	1.3	2.6	5.0	10
2-Propanol	5.0	Not Detected	12	Not Detected
Carbon Disulfide	5.0	Not Detected	16	Not Detected
Methylene Chloride	13	Not Detected	44	Not Detected
Hexane	1.3	24	4.4	84
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	Not Detected	15	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	8.6	6.9	47
Carbon Tetrachloride	1.3	Not Detected	7.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Trichloroethene	1.3	5.8	6.8	31
1,4-Dioxane	5.0	Not Detected	18	Not Detected
Toluene	1.3	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	160	8.5	1100
o-Xylene	1.3	Not Detected	5.5	Not Detected
TNMOC ref. to Heptane (MW=100)	25	700	100	2900

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1911148-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17111206**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/19 11:40 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: CCV

Lab ID#: 1911148-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17111202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/19 09:03 AM**	

Compound	%Recovery
Freon 12	91
Vinyl Chloride	89
Freon 11	92
Freon 113	83
1,1-Dichloroethene	82
2-Propanol	89
Carbon Disulfide	86
Methylene Chloride	101
Hexane	97
1,1-Dichloroethane	94
2-Butanone (Methyl Ethyl Ketone)	96
Chloroform	96
1,1,1-Trichloroethane	95
Carbon Tetrachloride	96
Benzene	98
1,2-Dichloroethane	93
Trichloroethene	95
1,4-Dioxane	104
Toluene	102
1,1,2-Trichloroethane	95
Tetrachloroethene	93
o-Xylene	98
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCS

Lab ID#: 1911148-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17111203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/19 09:30 AM**	

Compound	%Recovery	Method Limits
Freon 12	94	70-130
Vinyl Chloride	92	70-130
Freon 11	96	70-130
Freon 113	87	70-130
1,1-Dichloroethene	85	70-130
2-Propanol	94	70-130
Carbon Disulfide	91	70-130
Methylene Chloride	102	70-130
Hexane	100	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	105	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	99	70-130
Carbon Tetrachloride	101	70-130
Benzene	97	70-130
1,2-Dichloroethane	90	70-130
Trichloroethene	94	70-130
1,4-Dioxane	100	70-130
Toluene	98	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	91	70-130
o-Xylene	101	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: LCSD

Lab ID#: 1911148-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17111204**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/19 09:57 AM**	

Compound	%Recovery	Method Limits
Freon 12	89	70-130
Vinyl Chloride	91	70-130
Freon 11	91	70-130
Freon 113	84	70-130
1,1-Dichloroethene	83	70-130
2-Propanol	93	70-130
Carbon Disulfide	87	70-130
Methylene Chloride	96	70-130
Hexane	97	70-130
1,1-Dichloroethane	92	70-130
2-Butanone (Methyl Ethyl Ketone)	97	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	96	70-130
Carbon Tetrachloride	97	70-130
Benzene	98	70-130
1,2-Dichloroethane	93	70-130
Trichloroethene	98	70-130
1,4-Dioxane	105	70-130
Toluene	102	70-130
1,1,2-Trichloroethane	98	70-130
Tetrachloroethene	89	70-130
o-Xylene	100	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	96	70-130

1911148

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

AIR CHAIN OF CUSTODY RECORD

DATE: 11/04/19
PAGE: 1 OF 1

LABORATORY CLIENT: de maximis	CLIENT PROJECT NAME / NUMBER: Omega - OU1 SVE Monthly GAC Sampling	P.O. NO.:	
ADDRESS: 1322 Scott St., Suite 104	PROJECT ADDRESS: 12520 Whittier Blvd.	LAB CONTACT OR QUOTE NO.:	
CITY: San Diego / STATE: CA / ZIP: 92106	CITY: Whittier / STATE: CA / ZIP: 90602	LAB USE ONLY: ☐☐-☐☐☐☐	
TEL: (562) 756-8149 / EMAIL: jdinello@demaximis.com	PROJECT CONTACT: Trent henderson thenderson@jecobandhefner.com		
TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAYS ☐ 10 DAYS	SAMPLER(S): (NAME / SIGNATURE) Khalid Azhar		
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☑ EDD			
SPECIAL INSTRUCTIONS:			

LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type: (I) Indoor (SV) Soil Vap. (A) Ambient	Sampling Equipment Info: Canister ID#	Canister Size 6L or 1L	Flow Controller ID#	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	REQUESTED ANALYSES: TO-15 (TAL 2 3)
1	OC_SVE_EFF_GAC_110419	SP-EFF-GAC	SV	1L2639	1 L	23176	11/4/2019	1113	-29	11/4/2019	1118	-5	X
2	OC_SVE_MID_GAC_110419	SP-MID-GAC	SV	1L1789	1 L	24324	11/4/20019	1122	-29	11/4/2019	1128	-5	X
3	OC_SVE_INF_GAC_110419	SP-INF-GAC	SV	1L1621	1 L	23781	11/4/2019	1131	-28.5	11/4/2019	1136	-5	X
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

01A
02A
03A

Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:

Samples received on 11/7/19, COC on 11/8/19 @0919

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12/16/2019
Ms. Jaime Dinello
DeMaximis, Inc
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - OU1 SVE Monthly GAC Sampling
Project #:
Workorder #: 1912185

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 12/9/2019 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

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WORK ORDER #: 1912185

Work Order Summary

CLIENT:	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	**BILL TO:**	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
PHONE:	949.679.9290	**P.O. #**	
FAX:	949.679.9078	**PROJECT #**	Omega - OU1 SVE Monthly GAC Sampling
DATE RECEIVED:	12/09/2019	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	12/16/2019		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OC_SVE_EFF_GAC_120319	TO-15	5.3 "Hg	15.6 psi
02A	OC_SVE_MID_GAC_120319	TO-15	4.7 "Hg	15.4 psi
03A	OC_SVE_INF_GAC_120319	TO-15	5.7 "Hg	15.2 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 12/16/19

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP – CA009332019-11, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-011, Effective date: 10/18/2019, Expiration date: 10/17/2020.
Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
EPA Method TO-15
DeMaximis, Inc
Workorder# 1912185

Three 1 Liter Summa Canister samples were received on December 09, 2019. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The TNMOC concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of TNMOC ref. to Heptane (MW=100).

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC_SVE_EFF_GAC_120319

Lab ID#: 1912185-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	2.2	7.0	13
Freon 113	1.2	1.4	9.6	11
1,1-Dichloroethene	1.2	2.8	5.0	11
2-Butanone (Methyl Ethyl Ketone)	5.0	14	15	40
TNMOC ref. to Heptane (MW=100)	25	54	100	220

Client Sample ID: OC_SVE_MID_GAC_120319

Lab ID#: 1912185-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	1.5	6.8	8.2
Freon 113	1.2	1.8	9.3	14
1,1-Dichloroethene	1.2	2.1	4.8	8.4
2-Butanone (Methyl Ethyl Ketone)	4.9	12	14	37
TNMOC ref. to Heptane (MW=100)	24	41	99	170

Client Sample ID: OC_SVE_INF_GAC_120319

Lab ID#: 1912185-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	1.5	7.0	8.3
Freon 113	1.2	5.9	9.6	45
1,1-Dichloroethene	1.2	2.2	5.0	8.6
Hexane	1.2	7.7	4.4	27
2-Butanone (Methyl Ethyl Ketone)	5.0	17	15	50
1,1,1-Trichloroethane	1.2	8.6	6.8	47
Trichloroethene	1.2	4.4	6.7	24
Tetrachloroethene	1.2	83	8.5	560
TNMOC ref. to Heptane (MW=100)	25	420	100	1700

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Client Sample ID: OC_SVE_EFF_GAC_120319

Lab ID#: 1912185-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17121212**	**Date of Collection:**	**12/3/19 12:07:00 PM**
Dil. Factor:	**2.50**	**Date of Analysis:**	**12/12/19 04:16 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.2	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	2.2	7.0	13
Freon 113	1.2	1.4	9.6	11
1,1-Dichloroethene	1.2	2.8	5.0	11
2-Propanol	5.0	Not Detected	12	Not Detected
Carbon Disulfide	5.0	Not Detected	16	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	14	15	40
Chloroform	1.2	Not Detected	6.1	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.9	Not Detected
Benzene	1.2	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	Not Detected	6.7	Not Detected
1,4-Dioxane	5.0	Not Detected	18	Not Detected
Toluene	1.2	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Tetrachloroethene	1.2	Not Detected	8.5	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
TNMOC ref. to Heptane (MW=100)	25	54	100	220

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	128	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: OC_SVE_MID_GAC_120319

Lab ID#: 1912185-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17121213**	**Date of Collection:**	**12/3/19 12:08:00 PM**
Dil. Factor:	**2.43**	**Date of Analysis:**	**12/12/19 04:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	1.5	6.8	8.2
Freon 113	1.2	1.8	9.3	14
1,1-Dichloroethene	1.2	2.1	4.8	8.4
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	4.9	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.9	12	14	37
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
o-Xylene	1.2	Not Detected	5.3	Not Detected
TNMOC ref. to Heptane (MW=100)	24	41	99	170

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	124	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: OC_SVE_INF_GAC_120319

Lab ID#: 1912185-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17121214**	**Date of Collection:**	**12/3/19 12:09:00 PM**
Dil. Factor:	**2.51**	**Date of Analysis:**	**12/12/19 05:13 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.2	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	1.5	7.0	8.3
Freon 113	1.2	5.9	9.6	45
1,1-Dichloroethene	1.2	2.2	5.0	8.6
2-Propanol	5.0	Not Detected	12	Not Detected
Carbon Disulfide	5.0	Not Detected	16	Not Detected
Methylene Chloride	12	Not Detected	44	Not Detected
Hexane	1.2	7.7	4.4	27
1,1-Dichloroethane	1.2	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	17	15	50
Chloroform	1.2	Not Detected	6.1	Not Detected
1,1,1-Trichloroethane	1.2	8.6	6.8	47
Carbon Tetrachloride	1.2	Not Detected	7.9	Not Detected
Benzene	1.2	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.1	Not Detected
Trichloroethene	1.2	4.4	6.7	24
1,4-Dioxane	5.0	Not Detected	18	Not Detected
Toluene	1.2	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Tetrachloroethene	1.2	83	8.5	560
o-Xylene	1.2	Not Detected	5.4	Not Detected
TNMOC ref. to Heptane (MW=100)	25	420	100	1700

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	127	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1912185-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17121207**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/12/19 12:54 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	119	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: CCV

Lab ID#: 1912185-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17121202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/12/19 09:57 AM**	

Compound	%Recovery
Freon 12	112
Vinyl Chloride	80
Freon 11	122
Freon 113	99
1,1-Dichloroethene	85
2-Propanol	80
Carbon Disulfide	79
Methylene Chloride	92
Hexane	80
1,1-Dichloroethane	92
2-Butanone (Methyl Ethyl Ketone)	92
Chloroform	106
1,1,1-Trichloroethane	123
Carbon Tetrachloride	126
Benzene	92
1,2-Dichloroethane	118
Trichloroethene	101
1,4-Dioxane	96
Toluene	102
1,1,2-Trichloroethane	93
Tetrachloroethene	101
o-Xylene	102
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	125	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: LCS

Lab ID#: 1912185-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17121203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/12/19 10:24 AM**	

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Vinyl Chloride	76	70-130
Freon 11	122	70-130
Freon 113	94	70-130
1,1-Dichloroethene	79	70-130
2-Propanol	82	70-130
Carbon Disulfide	79	70-130
Methylene Chloride	86	70-130
Hexane	79	70-130
1,1-Dichloroethane	86	70-130
2-Butanone (Methyl Ethyl Ketone)	85	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	118	70-130
Carbon Tetrachloride	123	70-130
Benzene	90	70-130
1,2-Dichloroethane	111	70-130
Trichloroethene	97	70-130
1,4-Dioxane	99	70-130
Toluene	98	70-130
1,1,2-Trichloroethane	90	70-130
Tetrachloroethene	95	70-130
o-Xylene	98	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	124	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: LCSD

Lab ID#: 1912185-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17121204**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/12/19 10:51 AM**	

Compound	%Recovery	Method Limits
Freon 12	111	70-130
Vinyl Chloride	82	70-130
Freon 11	121	70-130
Freon 113	94	70-130
1,1-Dichloroethene	81	70-130
2-Propanol	83	70-130
Carbon Disulfide	78	70-130
Methylene Chloride	86	70-130
Hexane	81	70-130
1,1-Dichloroethane	87	70-130
2-Butanone (Methyl Ethyl Ketone)	87	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	121	70-130
Carbon Tetrachloride	126	70-130
Benzene	89	70-130
1,2-Dichloroethane	110	70-130
Trichloroethene	97	70-130
1,4-Dioxane	96	70-130
Toluene	98	70-130
1,1,2-Trichloroethane	87	70-130
Tetrachloroethene	92	70-130
o-Xylene	96	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	125	70-130
4-Bromofluorobenzene	107	70-130

Calscience Environmental Laboratories, Inc.

7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

1912185

AIR CHAIN OF CUSTODY RECORD

DATE: 12/03/19
PAGE: 1 OF 1

LABORATORY CLIENT: de maximis
ADDRESS: 1322 Scott St., Suite 104
CITY: San Diego STATE: CA ZIP: 92106
TEL: (562) 756-8149 EMAIL: jdinello@demaximis.com

CLIENT PROJECT NAME / NUMBER: Omega - OU1 SVE Monthly GAC Sampling
PROJECT ADDRESS: 12520 Whittier Blvd.
CITY: Whittier STATE: CA ZIP: 90602
PROJECT CONTACT: Trent henderson thenderson@jacobandhefner.com

P.O. NO.:
LAB CONTACT OR QUOTE NO.:
LAB USE ONLY

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAYS ☐ 10 DAYS

SAMPLER(S): (NAME / SIGNATURE) Khalid Azhar

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☑ EDD

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type: (I) Indoor (SV) Soil Vap (A) Ambient	Sampling Equipment Info: Canister ID#	Canister Size 6L or 1L	Flow Controller ID#	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	TO-15 (TAL 2.3)
1	OC_SVE_EFF_GAC_120319	SP-EFF-GAC	SV	1L3879	1 L	24308	12/3/2019	1202	-25	12/3/2019	1207	-5	X
2	OC_SVE_MID_GAC_120319	SP-MID-GAC	SV	1L2371	1 L	—	12/3/2019	1203	-26	12/3/2019	1208	-5	X
3	OC_SVE_INF_GAC_120319	SP-INF-GAC	SV	1L3832	1 L	24722	12/3/2019	1204	-26	12/3/2019	1209	-5	X
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

01A
02A
03A

Custody Seal Intact?
Y N None Temp NA

Relinquished by: (Signature)	Received by: (Signature)	Date: 12/04/19 Time: 0938
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:

ATTACHMENT G

Data Validation Repots

Data Quality Assessment
Vapor Phase GAC
OU-1 Full Scale On-Site Soil Remedy, Omega Chemical Superfund Site
Fourth Quarter 2019

SDG Number	Sample ID	Collection Date	Number of Samples	Analysis Method	QC Reviewed	Data Usability
1910127	OC_SVE_EFF_GAC_100119	10/01/2019	3	TO15	IC, CCB, Holding Times, Sample Receipt Conditions, Surrogates, MB, LCS/LCSD	The TNMOC value reported should not be used as TVOC as it is not the sum of the reported concentrations. No other qualification of sample results was warranted.
	OC_SVE_INF_GAC_100119					
	OC_SVE_MID_GAC_100119					
1911148	OC_SVE_EFF_GAC_110419	11/04/2019	3	TO15	IC, CCB, Holding Times, Sample Receipt Conditions, Surrogates, MB, LCS/LCSD	The TNMOC value reported should not be used as TVOC as it is not the sum of the reported concentrations. No other qualification of sample results was warranted.
	OC_SVE_INF_GAC_110419					
	OC_SVE_MID_GAC_110419					
1912185	OC_SVE_EFF_GAC_120319	12/03/2019	3	TO15	IC, CCB, Holding Times, Sample Receipt Conditions, Surrogates, MB, LCS/LCSD	The TNMOC value reported should not be used as TVOC as it is not the sum of the reported concentrations. No other qualification of sample results was warranted.
	OC_SVE_INF_GAC_120319					
	OC_SVE_MID_GAC_120319					

ATTACHMENT H

Summary of Indoor Air and Ambient Air Concentrations

(Not Included this Quarter)